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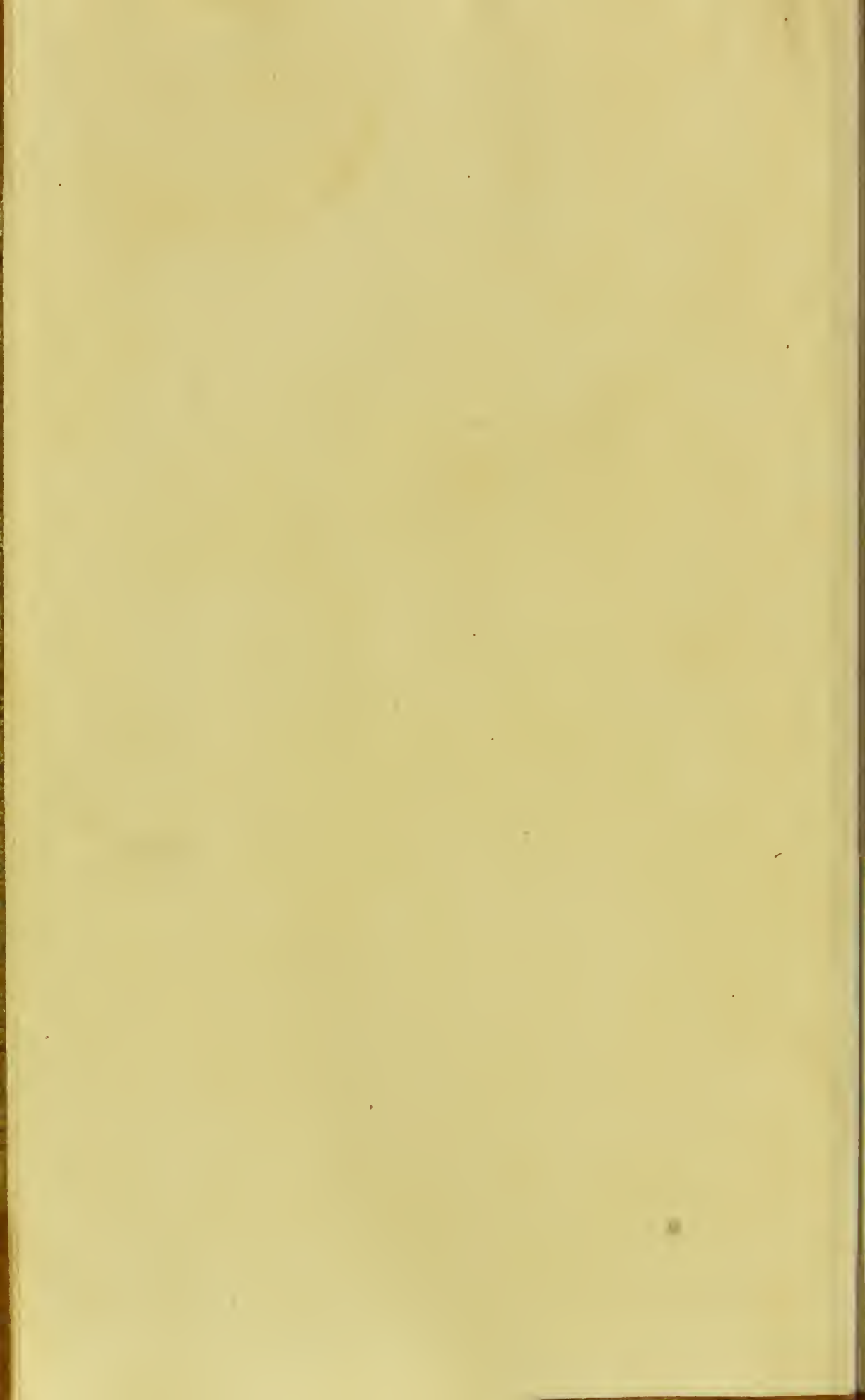
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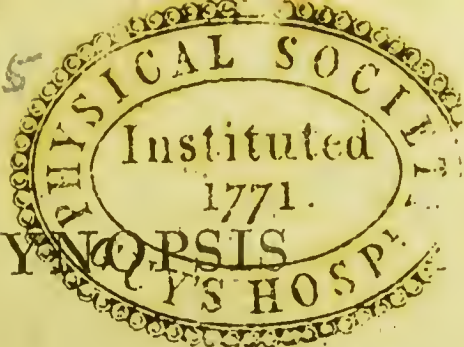


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A
PRACTICAL SYNOPSIS



OF THE

MATERIA ALIMENTARIA

AND

MATERIA MEDICA:

A NEW EDITION,

Comprising the latest Improvements

IN THE

LONDON, EDINBURGH. AND DUBLIN

PHARMACOPŒIAS.

By RICHARD PEARSON, M.D.

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to the General Hospital, near Birmingham.*

“~~—~~ morbos autem, non eloquentiâ, sed remediis curari.” CELS.

LONDON:

PRINTED FOR C. AND R. BALDWIN, NEW BRIDGE-STREET;
AND FOR JOHN MURRAY, 32, FLEET-STREET.

1808.

596069 GHPD RS 141.3 PEA



C. and R. Baldwin, Printers,
New Bridge-street, London.

PREFACE.

THE object of the present work is to exhibit a concise account of such substances from the Animal, Vegetable, and Mineral Kingdom, as are used either for food or medicine. Several works of this kind have already been published in this country. The most distinguished are those of *Lewis*, *Donald*, *Monro*, and *Cullen*. These works are deservedly held in high estimation, not only in this but in other countries. Each has its peculiar usefulness; and each merits a place in a physician's library. But notwithstanding all their excellence, they have not rendered unnecessary a treatise on the *Materia Medica*, upon such a plan as that which is now brought forward.

By far the greatest portion of *Lewis's* *Experimental History* of the *Materia Medica*, and of *Monro's* *Treatise on Medical Chemistry*, consists of details of pharmaceutical operations and chemical analyses, and histories of the sensible and chemical properties of the different substances used in medicine. These inquiries, it must be allowed, are of great value, and no person who is unacquainted with them, can be said to be duly qualified to undertake

the cure of diseases. They belong properly to such elementary treatises; but these, from their very nature, cannot be equally explicit upon practical points. Besides, the arrangement adopted in these treatises is calculated rather for the use of the student than of the practitioner.

The last remark does not apply to *Dr. Cullen's* great work on the *Materia Medica*; in which the different articles are arranged and discussed, with a reference to their employment in the cure of diseases; a method which is adopted in the present publication. If *Dr. Cullen's* work had not been swelled out to so great a bulk, by the frequent introduction of physiological and pathological disquisitions; and if, moreover, it had been published subsequently to the new-modelling of the London and Edinburgh pharmacopœias, there would have been little occasion for the present Synopsis. But these changes have made his *Materia Medica*, as well as *Lewis's*, less useful. It is true, that *Dr. Monro's* treatise, and *Aikin's* last edition of *Lewis*, comprize the whole of the new pharmacopœia of the London college; but since the publication of the last mentioned treatises, the Edinburgh pharmacopœia has twice undergone very considerable alterations. It appears, therefore, that there was sufficient room for a new treatise on the *Materia Medica*, on a compendious scale, drawn up conformably with the changes that have taken place in the British pharmacopœias, and giving an account of the latest additions and improvements that have been made in this branch of medical science. On such a plan is the present Synopsis; in the compo-

sition of which, occasional use has been made of the larger works already mentioned, as well as of *Dr. Duncan's New Dispensatory*, a work of unrivalled merit in all that relates to pharmaceutical chemistry. To the information derived from these sources, the Author has occasionally added such observations and cautions relative to the employment of various medicinal substances, as an experience of upwards of 16 years (partly in hospital partly in private practice) has enabled him to offer.*

In treating of each article, the following method has been pursued. Supposing it to be a vegetable, the Generic and Trivial names of *Linnaeus* are first given; then the Class and Order to which it belongs in the Sexual System; then the Natural Order, as improved by *Murray* in his *Apparatus Medicaminum*; then the country of which it is a native†; then the Officinal Name, and the Part or Parts used in Medicine; then the English name; then its Action upon the Human Body; the Diseases in which it is serviceable; the Doses and Forms in which it is prescribed; the Auxiliaries with which it is joined; the Preparations and Compositions directed to be made from it in the London and Edin-

* In the course of the ten years which have elapsed since the appearance of the 1st vol. of this Synopsis, without the Author's name, other compendious treatises on the materia medica, upon a similar plan, have been offered to the public: one, in particular, by *Dr. Murray*, of Edinburgh, which may be consulted with advantage.

† For all other matters relative to the Natural History of medicinal plants, and especially for minute descriptions of all their parts, the reader is referred to the works of *Bergius* and *Woodville*.

burgh pharmacopœias, with the relative proportions of the other ingredients in those compositions*; the Doses of such Preparations and Compositions; and, lastly, References to Authors of celebrity, who have written upon the subject under consideration.

From this sketch it will readily be seen, that this compendium is of a practical tendency; and hence it has been entitled, "A Practical Synopsis of the Materia Medica," in contradistinction to other works on the same subject, which contain descriptions relative to Natural History, details relative to Chemistry, and theories relative to Pathology.

Amid the great multitude of substances which the Materia Medica presents, and more especially in the crowded catalogue of such as belong to the vegetable kingdom, the comparative worth of each must vary considerably. To discriminate from the rest those which possess the greatest efficacy, cannot but be highly useful to young practitioners. Under this persuasion, the Author has marked with ¶ such substances as either in the trials of others, or in his own practice, have fallen short of their reputed virtues. In this attempt to estimate the compara-

* This account is intended to convey only a general knowledge of the officinal compositions, to such as are not engaged in practical pharmacy. Those whose business it is to prepare such compositions, must refer, for a detail of the different processes and especially of the more operose chemical processes, to the pharmacopœias themselves. It is proper to remark, that in the different vinous preparations, (with the exception of the vinum chalybeatum of the Dublin pharmacopœia) by white wine is meant Spanish white wine.

tive value of different medicines, he has profited much by the observations of *Cullen*. In a few instances, however, he has differed from that venerable authority, giving a more favourable report of some substances, and a less favourable one of others, than the Edinburgh professor has done.

In the account of the *Materia Alimentaria*, the Author acknowledges himself to be frequently indebted to the writings of *Zuchert*, *Richter*, *Plench*, *Lorry*, and *Cullen*. It may be added, that the arrangement of the *Systema Naturæ* of *Linnæus*, as edited by *Gmelin*, is followed, in treating of alimentary substances derived from the animal kingdom,

N.B. In the London pharmacopœia, where the contrary is not expressed, the liquids are taken by measure; but in the Edinburgh and Dublin pharmacopœias, liquids as well as solids are taken by weight.

Bloomsbury-Square,
Dec. 5, 1807.

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of this Synopsis are arranged.*

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PRACTICAL SYNOPSIS,

&c.

PART I.—ALIMENTARY SUBSTANCES.

I. *From the Animal Kingdom.*

OF the brute creation, some subsist exclusively on animal, others exclusively on vegetable substances. And some, fixed to particular spots of the earth, feed only upon one kind of animal substance, others only upon one kind of vegetable matter. Of those which feed on both kinds of aliment, the proportion is comparatively small.

It is otherwise with man. Not necessarily limited to any particular tract of the globe, but capable of living in every clime, and frequently compelled to seek subsistence in countries far remote, and widely different both in temperature and products from his own, man enjoys the most mixed and varied kind of food; insomuch that there is scarcely any class of animal or vegetable life which is not tributary to his support. But although the digestive organs of man are capable of extracting

nourishment from an infinite variety of animals, as well as vegetables; yet it is from the latter (*viz.* vegetables) that the majority of the human race derive their subsistence. The inhabitants of the warmer climates, and particularly many nations of the East, live almost wholly on vegetable food. Leaving the tropics, and proceeding to the higher latitudes, we find the proportion of animal to vegetable substances, used as food by man, to be greater: And, as we approach the polar circle, we find this proportion to increase still farther. In some of these frozen regions the inhabitants are not accustomed to the taste of vegetable food during a great part of the year.*

From this difference of food among different people, some philosophers have endeavoured to account for the difference of national character. The proverbial bravery of the English has been ascribed to the great quantity of flesh-meat which they eat; but it cannot be denied that there are other nations not less courageous, though not equally carnivorous. National character depends on other causes, the further consideration of which does not belong to a work of this nature.

How much soever the substances whether animal or vegetable, which are applicable to the sustenance of man, may differ from each other in taste and other sensible qualities; yet it appears that the nutritious fluid (called Chyle) extracted

* This is the case with the Esquimaux, and with the inhabitants of Greenland, Lapland and Kamtschatka.

from such substances by the process of digestion, is one and the same. Hence it follows that the different kinds of food are more or less nutritive, according as they are more or less convertible, by the gastric juice and other agents of digestion, into chyle. Now it is proved by numerous observations, that in equal weights, the flesh of most quadrupeds (not to mention other animals) is more readily and completely converted into chyle, by the process of digestion, than any vegetable matter whatever. Hence an animal diet is considerably more nourishing than a vegetable diet. It replenishes the body faster, inducing plethora and obesity. Animal food not only yields a greater proportion of chyle than vegetable aliment, but at the same time proves more stimulant and heating; on which account, although it imparts more immediate vigor, yet it is certain that it exhausts the constitution so much the sooner. Accordingly the most remarkable instances of longevity occur amongst those people who live chiefly or wholly (as the Brahmins do) upon vegetable substances. But on the whole a mixed diet, partly animal and partly vegetable, is that which is best adapted to those who live in temperate climates. (*Haller de Victu Salubri ex Animalibus et Vegetabilibus temperando.*)

From the properties of an animal diet above mentioned, it will be easily seen in what cases it is useful, and in what hurtful. It is useful in various cases of asthma and dyspepsia; in cachectic, chlorotic and diabetic cases; in rickets and scrophula; in worm-cases; and in certain chronic diseases of the skin, in which from a mistaken association of these

diseases with scurvy, animal food is too frequently interdicted. It is hurtful in all cases of active inflammation; in all disorders of the head and lungs, connected with a fulness of the vessels of those parts; and in bilious and calculous cases. And generally those who lead a studious and sedentary life should be cautious of indulging too freely in the use of animal food. It should further be mentioned that persons going from northern or temperate latitudes, to southern or tropical climates, should abstract from their customary allowance of flesh-meat, and habituate themselves to a larger proportion of vegetable food.

It has been already remarked that the flesh of certain quadrupeds yields the greatest quantity of chyle, in other words is the most nutritious of all kinds of animal food; but the relative nutrimental powers of the component parts of such flesh-meat, viz. of gelatine, albumen, fibrin or oil, have not been exactly ascertained by any experiments on digestion hitherto made. We only know that the flesh of young animals, which contains a greater proportion of gelatine, and a less proportion of fibrin, is generally not so digestible as the flesh of the same species of animals when come to the adult state.* This is particularly the case with veal, which moreover

* When it shall be ascertained which of the abovementioned component parts of flesh meat yields in equal weight, and under circumstances in all other respects the same, the greatest proportion of chyle; some steps will be made towards determining which more especially of the elementary principles, azote, hydrogen, oxygen, carbon, (besides earthy matter, &c.) into which

from its tendency to acidity disagrees with many weak stomachs. It may further be remarked that white meats are less stimulant, as well as less nutritious, than brown meats. In moderate quantities, the fat part of meat, when not rendered empyreumatic by over-roasting, is wholesome and exceedingly nourishing. Not only is there a considerable difference in regard to digestibility between the flesh of old and young animals, but also between the flesh of wild and domestic animals; the former being more readily and completely dissolved in the gastric and enteric juices, than the latter. Hence venison is esteemed the lightest and most nutritious of all kinds of animal food. For the same reason the pheasant and partridge are preferable to the domestic fowl. Flesh-meat which has been kept for some time is more readily dissolved in the stomach, and is more stimulant than that which is eaten immediately after the animal is killed. But when kept till it acquires a strong smell, it loses much of its nutrimental properties, and indeed ceases to be wholesome to man. It is scarcely necessary to remark that salted meat is much less digestible and much less nutritious than that which is fresh.

In regard to cookery, roast meat is more readily digested, and in equal weight yields a greater quantity of nourishment than boiled; many of the nutritive parts of the latter being dissolved in the water. It is

those component parts are resolved by chemical analysis, contributes to nutrition. At present all that has been advanced on this subject is mere conjecture.

obvious that, if in the operations of roasting and boiling, too much heat is applied, the food so overdone, instead of being rendered more digestible and more nutritious, becomes less so. In the process of maceration, or stewing, there is no loss of alimentary matter, as the nutritious juices which are extracted from the muscular substance or flesh, are collected in the liquor employed on the occasion, and served up along with the meat. This mode of cookery is well adapted to supply the place of mastication, and to facilitate digestion, in persons who have lost their teeth and are far advanced in years.

In all the instances above mentioned the fibrous substance itself of the meat is eaten, as well as its juices: but as the fibrous substance is too heavy, or difficult to be digested, to some weak and disordered stomachs, this inconvenience is remedied by another culinary process; viz. by making concentrated decoctions of flesh meat, termed Soups (see *POTULENTA*); in which all the soluble parts of the flesh meat are extracted by boiling water, leaving a residuum of fibrous matter, which is thrown away. These concentrated decoctions of animal substances, when not rendered too stimulant by the addition of spices, are only surpassed in nutritive power by the gravy of boiled and roasted meats. But these, and the weaker decoctions termed broths, will be more particularly noticed hereafter.

Respecting the artificial preparation of animal food we may further remark, that for healthy and active constitutions the simplest modes of cookery are

the best—those in which it is presented in its entire and undissolved state; for though most of the nutritious particles of animal matter are soluble in water, yet all that is convertible into chyle by the action of the gastric and enteric juices, is not.

Within a few hours after a portion of beef has been taken into the stomach of a healthy carnivorous animal, it is found reduced to a pultaceous mass, without the smallest vestige of a fibrous structure remaining; but if an equal quantity of the same animal substance be boiled in water for a much greater length of time, only a small portion will be dissolved, and a considerable residuum of fibrous matter will be left behind. It follows, therefore, that a pound of flesh, or muscular fibre swallowed in substance, will yield more nourishment, when acted upon by a healthy stomach, than the concentrated decoction or soup prepared from an equal weight. (FORDYCE on Digestion.) It is the same with certain medicinal substances. The gastric juice is capable of dissolving a greater proportion of cinchona in substance than water is; hence a pound of the cinchona-bark swallowed at different times, in substance, will cure more agues than the decoctions obtained from an equal quantity of that bark. But as there are disorders in which the cinchona disagrees in substance, and is yet bearable in decoction; there are likewise instances, and those by no means unfrequent, in which the stomach, unequal to the digestion of animal food in substance, can only extract a sufficient supply of nourishment from it when taken in a liquid state. Hence

cookery, as well as pharmacy, becomes subservient to health.

As the gastric juice is the principal agent in digestion, it follows that whatever tends to promote its secretion, tends in an equal degree to promote digestion. Like the biliary and some other secretions, the secretion of the gastric juice is much influenced by the degree of temperature (JOHN HUNTER on Digestion) to which the living body is exposed; by all things which disturb the circulation and irritate the nerves; and particularly by anger, grief, and other passions of the mind.* From such causes not only the quantity, but the quality also of the gastric juice, varies at different times in the same individual. Hence we should avoid being hurried or over heated when we sit down to our meals. A serene and cheerful state of mind is particularly favourable to the gastric secretion, in other words to digestion. As tranquillity of mind, so also a quiescent state of body for an hour or two after a principal meal, conduces to the same end. But it does not appear that sleeping after dinner is attended with any advantage, except in case of great fatigue and uneasiness of mind, or where a person is much advanced in years (CULLEN, *Mat. Med.* Vol. I. 369) or, as in the warm climates, is exhausted by heat. In all other circumstances an inclination to sleep after dinner is a proof of indigestion, occasioned either by the quantity or quality of the food.

* See some ingenious observations on this subject, illustrated by experiments, in the 4th Vol. of DUMAS' *Physiologie*.

It cannot be doubted (as SENNEBIER has observed) that a moderate distension of the stomach by food operates as a stimulus to that organ, and accordingly promotes the secretion of the gastric juice; but a state of over-distension from too full a meal has a contrary effect. In this state of things the stomach becomes irritated and oppressed, whence the secretion of the gastric juice is impeded or suspended, and of course indigestion takes place. Hence, when the appetite is keener than usual, or when a favourite dish is served up, we should be cautious of eating to the full extent of our inclination or cravings. Another source of stimulus to the gastric secretion is variety in the kinds of aliment, both animal and vegetable; taken at a meal. When this does not prove an incitement to excess, it is not more agreeable to the palate than conducive to health. (LINNÆUS *de Varietate Ciborum apud Amœnitat. Acad. Vol. VII.*)

The process of digestion is often obstructed by a too hasty and too copious ingurgitation of liquids, even when they are of the simplest and most salutary kind. By such excessive dilution, the solvent power of the gastric juice on the solid parts of the food, is very much weakened, and consequently a less quantity of chyle is afterwards extracted from it. Part of the food in such cases is carried off the stomach in a half digested state. Hence when we eat solid food (which should always be well comminuted by mastication, during which it is mixed with the saliva, a fluid of considerable use in digestion,) we should allow a short time to elapse before we swallow our customary beverage; and

that should be taken at intervals, and not all at once. In this manner the solid parts of the food, coming into closer contact with the gastric juice, will be more perfectly digested. If it be improper to swallow copious draughts of liquids immediately on eating solid food, it is still worse to swallow them just before. But this subject will be further considered when we come to treat of Drinks. See POTULENTA.

Lastly, the secretion of the gastric juice is influenced by other causes besides those above mentioned; viz. by various stimulating substances taken along with our food, and known by the name of Condiments. Of these the most general are muriate of soda (common salt) and spices.* See CONDIMENTA.

We now proceed to notice the principal alimentary substances derived from the various classes of animals. In doing this we shall follow the Linnæan arrangement.

A. MAMMALIA. *Mammiferous Quadrupeds.*

In equal weights, the flesh of quadrupeds is the most nourishing of all kinds of animal food.

Of the first 2 orders of mammiferous quadrupeds,

* From some experiments made by Mons. DUMAS on dogs, it appears that the secretion of the gastric juice is promoted in a very remarkable manner by various kinds of stimulant substances introduced into the stomach. See the 4th vol of his Physiologie.

viz. I. PRIMATES and II. BRUTA none are eaten by the inhabitants of civilized countries.

Among the edible animals which belong to the

III. FERÆ. *Leonine Family*,

may be mentioned the

¶ *URSUS arctos*. The black Bear; the flesh of which is used for food by the common people in Norway, Russia, and Poland. It has a strong, disagreeable smell, and is difficultly digested. It is generally salted and dried before it is dressed.

¶ *DIDELPHIS Opossum*. The Opossum. The flesh of this animal is eaten in many parts of America, and in some parts of Asia.

¶ *DIDELPHIS gigantea*. The Kangaroo. Though the flesh of this animal is very coarse, yet it is eaten in New Holland, where better animal food is scarce.

Several other species of the opossum tribe are used for food in South America, where their flesh is reckoned equally good with that of the rabbit or hare.

CAVIA Paca. The spotted Cavy.

— *Aguti*. The long-nosed Cavy.

— *Aperea*. The rock Cavy.

— *Cobaya*. The Guinea Pig, or restless Cavy.

The flesh of these and other species of cavia, is

much esteemed in Guaiana, Brazil, and other parts of South America. The flesh of some of them is white, and resembles that of the rabbit. According to Stedman nothing can be better eating than the Paca, or Spotted Cavy.

¶ *ARCTOMYS Marmota*. The Alpine Marmot. Notwithstanding its strong, disagreeable smell, the flesh of this animal is eaten by the poorer inhabitants of Tyrol, Savoy, and other parts of the Alps. Other edible species of this genus, are

¶ *ARCTOMYS Monax*. The Maryland Marmot.

———— *Bobac*. The Bobak.

———— *Citellus*. The Casan, or earless Marmot.

SCIURUS vulgaris. The common Squirrel. The flesh of this animal, which subsists chiefly upon nuts, acorns, and the seeds contained in the cones of fir-trees, is white, sweetish, and readily enough digested. In its flavour it resembles the flesh of a barn-door fowl, and is much eaten in Norway and Sweden. Several of the foreign species of *sciurus*, are in like manner edible.

IV. GLIRES. *Leporine Family*.

LEPUS timidus. The Hare. The flesh of the full grown hare affords a well-flavoured and stimulant food.

LEPUS cuniculus. The Rabbit. Its flesh is palatable and moderately nutritive; and being less stimulant than the flesh of the hare, it is on that account

better suited to the weak and convalescent. The flesh of wild rabbits is not only more palatable, but more digestible than the flesh of tame ones.

V. PECORA. *Bovine Family.*

CERVUS Alces. The Elk. In Norway, Lapland, and Sweden, the flesh of the young elk is much esteemed, and is found to be sufficiently digestible. The flesh of the full-grown animal affords a food which lies long upon the stomach, but is very nourishing. It is often salted and dried.

CERVUS Elaphus. The Stag. The flesh of the cervus elaphus varies according to the age and sex of the individual. In the *fawn* state, the flesh is tender and nourishing; but by no means so savoury as that of the full-grown animal, known by the name of *Venison* (*Ferina*). This is a very nutritive, digestible, and wholesome food. It should be more than four years old. The season for killing it is the month of August; it is then the fattest and best-flavoured. In September and October the rutting season takes place; during which the stags become lean, and their flesh acquires a rank smell and disagreeable taste. The females of this species are called *Hinds*. Their flesh is reckoned inferior to that of the males. A nutritive, demulcent *jelly* (*gelatina cornu cervi*) is prepared by boiling the horns of this animal, rasped or shaven, in a proper quantity of water. A medicinal decoction is prepared from the burnt horns, as will hereafter be noticed.

CERVUS *Tarandus*. The Rein Deer. This animal, so valuable to the inhabitants of Norway and Lapland, affords a tender, savoury, and wholesome food, not unlike to stag-venison. Rein-deer are generally killed when they are about eight or nine years old, after they have been employed in drawing the sledge, or in other labour, for four or five years. Their tongues are esteemed a great delicacy; they are dried and sent into other countries in considerable quantity. The females are milked like cows. Their *milk* is sweet and nourishing, and cheese is sometimes prepared from it.

CERVUS *Dama*. The Fallow Deer. The flesh of this species, so common in parks all over England, is similar to that of the Stag. As, however, it is generally better fattened and less exercised, *Buck venison* is esteemed the finest. Both this and *Doe venison*, are a light and wholesome food.

CERVUS *Capreolus*. The Roe buck. The flesh of this species is tender and readily digested; but, upon the whole, not equal to that of the fallow-deer.

¶ ANTILOPE *Rupicapra*. The Chamois. Its flesh is tough and coarse; but it is nevertheless gladly eaten by the poorer part of the inhabitants of the Alps. The flesh of some of the other species of Antelope is lighter and finer flavoured.

¶ CAPRA *Hircus*. The Domestic Goat. The

flesh of this species, especially of the male (*caro hircina*) is exceedingly strong, hard, and difficultly digested. The flesh of the female (*caro caprina*) is not so tough and ill-flavoured; but is nevertheless a very coarse and heavy meat. Yet in the mountainous parts of Scotland, Ireland, and Wales, the flesh of the full-grown animal, salted and dried, is a common winter food; and the flesh of the *Kid* (*caro hœdina*) is reckoned a great delicacy. *Goat's milk* (*lac caprinum*) resembles cow's milk in the abundance of oily and coagulable matter which it contains (*Parmentier et Deyeux Annales de Chemie t. 6. 192, 193*). It is prescribed by many practitioners with great advantage in consumptive cases. The goat browses upon a great variety of mountainous plants, many of which possess medicinal virtues, with which the milk becomes in some degree impregnated. As it contains but a small proportion of whey, it should be diluted with water when it is used medicinally. Where asses milk has proved purgative, goat's milk has been used in its stead with good effect. *Butter* and *cheese* made from the milk of this animal, are not much inferior to those prepared from cows milk. The cheese, however, is liable to become rancid by keeping.

¶ *CAPRA Ibex*. The Wild Goat. The flesh of this species is hard and coarse. It is, however, eaten by the peasants of the Alps.

Ovis Aries. The common Sheep. Mutton (*caro ovilla*) is well known to be a highly nutritious and wholesome meat. It is perhaps more

universally used than any other animal food. *Tup-mutton* (caro arietis) has such a strong smell and disagreeable taste, and is besides so exceedingly tough and difficultly digested, that it is never eaten but by those who cannot afford to purchase mutton of a better quality. *Ewe-mutton* (caro ovis femellæ) if it be more than between two or three years old, is likewise tough and coarse. *Wedder-mutton* (caro vervecina) or the flesh of the castrated animal is most esteemed, and is by far the most palatable and most digestible. *Lamb* (caro agnina) being less heating and less dense, is better suited to weak stomachs; but this applies only to the flesh of lambs that have not been robbed of their blood by repeated bleeding, or reared by the hand with milk adulterated with chalk, in order to make the meat appear white. Such practices to render the food pleasing to the eye, at the expence of its alimentary properties, cannot be too much reprobated. *Ewe's milk* (lac ovillum) is thick and heavy; it abounds in cream, and contains but a small proportion of whey (It contains less whey than any of the other kinds of milk. *Parmentier*) and is scarcely ever used either in the way of diet or medicine. *Mutton-broth* (jus vervecinum) is often taken, but not very properly, by delicate and weak persons. It is strong, and does not sit very well upon the stomach. *Broth made of Sheep's trotters* (decoctum pedum vervecinorum) is administered clyster-wise in abrasions and ulcerations of the intestinal canal, and in other cases in which nourishment cannot be given by the mouth.

Bos Taurus The common Bull and Cow. The

flesh of the bull has a strong disagreeable smell; and is tough, dry, and difficultly soluble in the stomach. *Bull-beef* (caro taurinā) is rarely eaten: But the flesh of the ox, or castrated animal, called *Ox-beef* (caro bubula vel bovina) is a highly nourishing and wholesome food, readily digested by healthy persons, and constituting a principal part of the common diet of the inhabitants of this and many other countries. It is the most strengthening of all kinds of animal food. *Cow-beef* (caro vaccina) is not so tender, nor perhaps quite so nourishing as ox-beef. *Veal* (caro vitulina) is more tender but less nourishing; it is not so easily digested, nor so well suited to many states of debility, as is commonly imagined. It is a matter of just complaint, that the same injurious methods (particularly bleeding) are practised in the management and rearing of calves, as have been already noticed under the article Lamb. By such treatment the quality of the flesh is much depraved. What is called *Beef-tea* (infusum carnis bubulæ) is prepared by putting a pound of the lean part of beef, cut into very thin slices into a quart of water, and boiling it over a quick fire about ten minutes, taking off the scum. The liquor is afterwards poured off clear for use. This makes a light and pleasant article of diet for weak and delicate people. On some occasions spices may be advantageously added to it. *Gravy-soup* (jus carnis bubulæ concentratum) is more nourishing; but at the same time it is more stimulant and heating (especially when much spiced) and therefore only suited to those who are accustomed to high living. *Veal broth* (jus vitulinum) is nourishing without being heating. It is used

clyster-wise, as well as taken into the stomach. *Calves-feet jelly* (gelatina ex pedibus vitulinis) i. e. the inspissated decoction of the feet, is highly nutritious and demulcent.

It belongs to this place to take notice of that useful animal secretion, milk. *Cows-milk* (lac vaccinum) like the milk of most * other animals, is resolvable into three parts, very different in their properties from each other, viz. the oily part, which yields cream and butter; the coagulable part which gives curd and cheese; and the watery saccharine part, which constitutes whey. The coagulable part is very abundant in the milk of cows, goats and sheep; but the proportion is smaller in the milk of asses and mares; and in woman's milk, the proportion of coagulable part appears to be least of all. (*Parmentier Annales de Chimie*, t. vi. 195, and also additional experiments in the vol. for 1799.) It is chiefly owing to the greater or less proportion of the curdy matter, that the milk of different animals is heavier or lighter upon the stomach; in other words, more or less digestible. Hence next to woman's milk, mare's and ass's milk is the lightest.

Milk seems to hold a middle place between animal and vegetable food. Unlike other animal fluids, it does not, on keeping, run into the putrefactive fermentation, but turns sour; and in consequence

* Of most other animals; for woman's milk contains very little coagulable matter.

of the sugar which it contains, an intoxicating liquor may be prepared from it. See Koumiss.

Milk is the natural and proper food of the young of all animals of the mammalia class, for some time after birth: And Cow's-milk makes a principal part of the daily diet of a large proportion of the human race, both in the infant and adult state. On account of the abundance of oily and coagulable matter which it contains, *cow's-milk* is to infants by no means so well suited as human milk;* but as the quality of woman's milk too often becomes depraved, or its secretion stopped by the luxurious and debilitating habits of civilized life, cow's-milk in too many instances becomes a necessary substitute. On such occasions, as it is too heavy to be given alone, it should be diluted with water; and as it is disposed to become more acescent than human milk, and from that cause to produce gripings and other disorders of the bowels, in young children, it will often be useful to mix with it decoctions of animal substances, such as chicken or veal broth, or decoction of hartshorn shavings; of which last two ounces should be boiled in a quart of water, over a gentle fire, till the whole is reduced to a pint; when, after it is become cold, it will be of the consistence

* LINNÆUS has remarked that a great proportion of children attempted to be fed with cow's-milk, in place of the mother's milk, are never reared. This he attributes to the greater tendency to acidity in the milk of the cow, an herbivorous animal, whereas in the human subject, the diet is chiefly animal. *Linn. de Nutrice Noverca*. Another cause why cow's-milk disorders infants is the greater quantity of coagulable matter which it contains.

of a light jelly. This, mixed with about twice its quantity of cow's-milk, with the addition of a little sugar, forms for young subjects a proper aliment, approaching nearly to the nature of human milk.

Milk is used medicinally (1) in *some forms* (not the tuberculous) and *stages of pulmonary consumption*,* (2) in *gouty affections* after the paroxysm is gone off, and as the means of preventing a recurrence †, (3) in *small-pox*, diluted with water, as the common drink, (4) in *measles*, especially the malignant kind, diluted in the same manner, (5) in *gonorrhœa*, *lues venerea*, and during a *mercurial salivation*, (6) in *cancerous affections*, (7) in cases where *mineral and animal poisons* have been swallowed, (8) in cases of *strangury* and *dysury* from the absorption of cantharides, &c. (9) in *calculous affections*, (10) in *fluor albus*.

In general milk is improper in fevers unattended with pustulous eruptions; in bilious disorders; in cases of dyspepsia; in scrophulous complaints; in rickets; in worm-cases.

Milk is rendered heavier by boiling, and is very liable (though unboiled milk is not) to produce costiveness. In many instances it agrees best when mixed with a third part of boiling water. To ob-

* Rather in the predisposition to phthisis, than in actual phthisis.

† But with many limitations. The truth is, that in constitutions shattered by repeated attacks of the gout, a milk diet ought not to be attempted.

viate costiveness, it is often proper to boil oatmeal with it; or, which is a lighter preparation, to add thin gruel in a boiling state, to an equal quantity of cold milk. To prevent acidity, and to adapt it to the stomachs of different invalids, it is not unusual to mix lime-water or Soda-water with milk, or to dilute it with Pyrmont, Seltzer, and other mineral waters. *Fischer de Lacte*, optimo Alimento et Medicamento, 1749. *Young de Lacte*, 1761. *Cullen Mat. Med.* Vol. I. Part I. Ch. II.

During the use of a milk diet, acids and fermented liquors, and particularly wine, should be forbidden. (*Richter de Insalubri Lactis et Vini Miscela* 1756.)

The following are the principal products and preparations of milk in diet and in medical use :

Cream (Flos vel Cremor Lactis) is the oily part of milk, with an admixture of a small proportion of the coagulable part, and some of the serum. It is, as might be inferred from its composition, the richest and most nutritious part of milk, and when fresh it is very wholesome, provided it be taken in moderate quantities.

Butter (Butyrum) is obtained from cream by churning ; during which process the oil is supposed to combine with oxygen. When fresh it possesses like cream very nourishing properties ; and is only unwholesome when taken in immoderate quantities, or in a rancid state. -

Curds (Coagulum Lactis), which are separated from milk by runnet, are considerably nutritious, but not easily digested. Nevertheless, milk coagulated in a particular manner, and known by the name of Corstorphin Cream, is often eaten by the middling rank of people, in the summer time, in Scotland, where it is brought to market in all the principal towns. *Dr. Cullen* considers it to be tolerably nourishing; and in consequence of the quantity of acid retained in it, to be moderately, but gratefully, acid and cooling. He frequently prescribed it to phthisical patients, and neither in these, nor in any other persons, had he ever known any disorders of the stomach or intestines arising from the free use of it. The preparation (as described by the last mentioned authour) is as follows: A portion of skimmed milk is put into a wooden vessel, deeper than wide, and which has a hole in its bottom stopped up with a peg, which upon being taken out will allow a liquor to be drawn out of the vessel. This vessel is to be set in another that is wider and deeper, in which the smaller vessel may be surrounded with boiling water. When this is done, the vessels are allowed to remain for one or two days, more or less, according to the state of the weather; after which time the milk is found coagulated, and the watery part, separated from the coagulum, has subsided to the bottom of the vessel. This acid water is drawn off by the aperture above mentioned, and the small vessel being again stopped up, it is again set in the larger vessel, to be surrounded with boiling water as before. After matters have remained in this

state for 24 hours longer, it is found that more of an acid water has been separated from the coagulum; and this water being drawn off as before, the coagulum, now of a pretty thick consistence, is stirred and agitated briskly by a wooden stick, and in this state it is put upon the table.

Cheese (Caseus) is prepared (as is well known) from the curd separated from milk by runnet, and afterwards subjected to strong pressure, and then more or less salted. The quality of cheese varies according to the kind and quality of the milk from which it is prepared, according to the quantity of oil and whey which the coagulable matter retains (in other words, according to the different modes of separating and pressing the curds) and lastly, according to its age. In general, it is an aliment suited only to strong stomachs, and to such persons as use great and constant exercise. It is apt to occasion costiveness. In the higher orders of society, it is used chiefly as a condiment.

Toasted cheese is not (*Cullen Mat. Med. Vol. i. Part i. p. 351*) easily digested by weak stomachs; and for those who can be hurt by indigestion, or heated by a heavy supper, it is a very improper diet.

The countries most celebrated for cheese, are England, Holland, Switzerland, and Italy. The best English cheeses are the Cheshire, Gloucester, and Stilton; the Italian cheese in most esteem, is the Parmesan. Besides the *Gruyeres* cheese, which is made in the canton of Friburg, the *green Swiss*

cheese (called *Schabziger*) which is made in the canton of Glaris is much sought after. The last-mentioned cheese owes its flavour and colour to the herb melilot (*Trifolium melilotus officinalis*, Linn.) which, after being dried, pounded, and sifted, is mixed with the curds from which the whey is previously expressed. This cheese is brought to table in a powdery state, and is generally mixed with butter before it is eaten. It is reckoned stomachic.

Butter-milk (*Lac ebutyratum*) is milk deprived of its oily matter by churning. It is cooling, aperient and nourishing; and is often prescribed in cachexies, atrophies and consumptions.

Whey (*Serum Lactis*) is the thin watery part of milk, freed in a great measure from the oily and coagulable matter. It contains a considerable quantity of saccharine matter, called sugar of milk. It is lightly nutritive, diluent, aperient and diuretic, and is recommended in consumptions, jaundice, dysentery; alone, or mixed with mineral waters, or impregnated with the juices of medicinal herbs. *Hoffmann de Seri Lactis Virtute*, 1725.

Wine whey (*Serum Lactis Vinosum*) *tamarind whey* (*Serum Lactis Tamarindatum*) *tartar whey* (*Serum Lactis Tartarisatum*) *mustard whey* (*Serum Lactis Sinapinum*) &c. will be noticed in their proper places.

Sugar of Milk (*Saccharum Lactis*) is obtained from whey, by evaporation. It was formerly called the essential salt of milk. It has been much ex-

tolled by some foreign writers as a remedy in consumptions. *Willjamoze de Sale Lactis Essentiali*, 1756.

Bos Americanus. The American Bison.

—— *Moschatus*. The Musk Bull.

—— *Bubulus*. The Buffalo.

—— *Caffer*. The Cape ox.

Of all these different species of the ox-kind, the flesh is eatable; but it is much inferior to that of the domestic ox. The flesh of the *bos moschatus* has a strong flavour of musk; and that of the *bos caffer* is said to taste like venison.

VI. BELLUÆ. Equine Family.

Equus Caballus. The Horse. *Equa*. The Mare. *Mare's-milk* (lac equinum) very much resembles the milk of asses. Like the latter it contains a large proportion of serum, with a small proportion of oily and coagulable matter. Hence, where asses-milk is not to be had, it may be advantageously used in its stead. It is from mare's-milk that the Kalmuck Tartars prepare their favourite beverage, called *Koumiss*; for which purpose the milk is suffered to run into the vinous fermentation. By distillation it yields an ardent spirit. It appears that a similar vinous liquor, affording by distillation an ardent spirit, may be obtained from the milk of other animals. (*Oseretzkowsky de Spiritu Ardente ex Lacte Bubulo*, 1778). An account of this spirituous product of milk was published many years ago by SPIELMAN (*Memoirs de la Soc. de Med. a*

Paris an. 1776; and Dr. *Grieve* has published observations on its medical uses in the 1st vol. of the Transactions of the Royal Society of Edinburgh. In one case of incipient phthisis, it appeared to be of considerable service. It may, however, be doubted whether as an alimentary or medicinal article, koumiss be in any degree preferable to butter-milk and whey.

Equus Asinus. The Ass. *Asina.* The Female Ass. In the milk of this animal, the proportion both of oily and coagulable matter is very small. The serum abounds in sugar of milk. As it contains so little curd, it is easily digested and well suited to weak stomachs. It is a well known remedy in (1) *consumptions*. And by virtue of its diluent and diuretic operation, it frequently proves serviceable in (2) *arthritic* (3) *rheumatic* and (4) *icteric cases*, (5) in *disorders of the urinary passages*, (6) in *fluor albus*, (7) in *cancerous affections*; and generally in all those cases in which cows-milk is recommended. (*Hoffman* de mirabili lactis asinini usu in medendo). Ass's-milk is generally taken early in the morning, upon an empty stomach, in the quantity of half a pint; but where much reliance is placed upon it, it ought to be given, in somewhat smaller doses, repeated three or four times in the day. It should also be begun upon sooner, and not, as is too often the case, recommended until all other things have been tried in vain. In some cases Soda-water, and lime-water, in others Seltzer and Pymont waters, are advantageously mixed with it. It is evident that the best seasons for drinking ass's-milk, are spring and summer, as at those times there is the

greatest variety of green food for the asses. The milk of asses fed with hay or other dry fodder, is neither so light nor so salutary.

TAPIR Americanus. The Tapir. The flesh of this animal, which is about the size of a small cow, is much liked by the inhabitants of South America, in many parts of which tapirs are met with in great numbers; but it is much inferior to our beef.

Sus Scrofa.

(a.) *Ferus* (Aper). The Wild Boar. The flesh of the wild boar (*caro aprina*) is dense, but sufficiently tender, very nourishing, and more savoury than that of the domestic hog. But as the general properties of both are the same, they will be noticed under the article Pork. The flesh of the wild boar is in season in October. The head is esteemed the finest part. The flesh of the young animal is reckoned a great delicacy.

(b) *Domesticus* (*vulgaris*). The common, or domestic Boar (*Verres*). The Sow (*Scrofa*). The flesh of the boar and of the sow that has often farrowed, is strong, lean, and coarse, and makes bad bacon. It is the flesh of the castrated animal that is in common use, and that is known by the name of *Pork* (*caro porcina*). On account of the fat or lard with which it abounds, it is not very easily digested. It is a very savoury stimulant food, and affords a strong nourishment, suited to persons who lead an active or laborious life. The ancients as-

signed it the first place among aliments, and it constituted a principal part of the diet of the *athletæ*. The too frequent and long continued use of this meat favours obesity, produces foulness of the stomach and bowels, and occasions disorders of the skin. This is said to be case with the inhabitants of Lima, who are much addicted to the use of pork. The quality of pork and swine's flesh varies remarkably according to the kind of food on which the animal feeds. Thus in Corsica where the hogs feed on chestnuts, and in Persia where they are often fed upon dates, their flesh is peculiarly good. This is also the case in some of the tropical latitudes, where the hogs are fattened with the sugar-cane. The flesh of the *Sucking-pig* (*caro porcelli lactentis*) is reckoned a great delicacy; it is very nourishing; but by reason of the quantity of fat and gelatine, it is not very readily dissolved in the stomach, and is therefore by no means a proper food for weak and sickly persons. *Bacon* (*caro suilla vel porcina salita et infumata*) is a coarse and heavy food, only fit to be taken in considerable quantity by robust and labouring people. When it constitutes a principal part of the daily diet, it brings on the scurvy and other cachectic disorders.

The flesh of all the different species of this genus is edible. The flesh of the

¶ *Sus Tajassu*. The Peccary, or Mexican Hog, becomes tainted with a strong musky taste and smell, unless the odoriferous gland upon the back is cut off immediately after the animal is killed. The flesh of the

¶ *Sus Babyrussa*. The Indian Hog, is much esteemed in Java, Borneo, and other islands in the Indian ocean.

B. AVES. BIRDS.

Next in nutritive power to the flesh of mammiferous quadrupeds, is the flesh of the feathered tribe. The flesh of birds varies exceedingly in regard to digestibility and stimulant property, according as they feed on vegetable or animal substances, (and on particular kinds of animal food, such as fish, worms and insects) and according as they are inhabitants of land or water. Hence the striking difference between the flesh of the gallinaceous and that of the anserine tribe, between the flesh of the scolopaceous and that of the passerine tribe. With the exception of the first mentioned tribe, the flesh of all of them is more stimulant, but in equal weights less nourishing than that of the mammiferous quadrupeds. Their flesh is also more digestible, that of some waterfowl excepted; and hence is better suited to the infirm and those who lead a sedentary life. The wild, and those which have their liberty, are in all instances preferable to such as are tame and confined.

I. ACCIPITRES. *Aquiline Family*. O.

II. PICÆ. *Corvine Family*.

¶ *CORVUS frugilegus*. The Rook. Young rooks, stripped of their skins are dressed in the same manner as young pigeons, from which they are not very different in flavour and degree of digestibility.

¶ *Picus viridis*. The Green Woodpecker. The flesh of this and several other species of this genus, is sufficiently palatable, though it is not very quickly dissolved in the stomach. In this country, where there is such a great variety of birds that afford a better aliment, the woodpecker is seldom eaten.

III. ANSERES. *Anserine Family*.

ANAS. All the species of this genus are edible; but those only will be noticed here that are most in use. Such are the

¶ ANAS *Cygnus*. The wild Swan. A. *Olor*. The tame Swan. The flesh of the young swan or cygnet, is similar in flavour and other qualities to that of the goose. Formerly it was reckoned a great delicacy.

ANAS *Anser*. The Goose (wild and tame). The flesh of this bird is very savoury, but is a strong, heavy, and stimulant food. The young bird is esteemed a delicacy. The flesh of these birds is an improper food for weak and delicate persons. Some of the poulterers at Vienna have a method of enlarging the livers of geese by cramming them (whilst they are kept in small pens in which they cannot move) with Indian corn, and allowing them little or no water. The diseased livers thus procured are reckoned a great delicacy!

¶ ANAS *Bernicla*. The Bernacle, or Brent Goose. The flesh of this species, which has a fishy taste,

is much relished by many people. It is not very easily digested.

ANAS Moschata. The Muscovy Duck. When tamed and properly fed, much the same in flavour and digestibility as the common duck.

ANAS Penelope. The Widgeon.

—— *ferina.* The Pochard.

—— *Crecca.* The Teal. The flesh of the last three species resembles in taste and other qualities that of the

ANAS Boschas. The Wild Duck; which is a well known delicacy, more savoury and more stimulant than the

ANAS domestica. Common tame Duck. The young of both species (*Cullen Mat. Med. Vol. I. p. 380*) being of a more viscid texture, are more slowly digested than the adult birds.

¶ *ALCA arctica.* The Puffin. The flesh of this bird, which abounds with fat or grease, has a very fishy taste, and is not very readily dissolved in the stomach. When potted with spices, it is much relished by many persons; but it should be eaten sparingly, as it is far from being a wholesome food.

¶ *ALCA Torda.* The Razor-bill.

—— *cirrhatta.* The Tufted Auk. The flesh of these is scarcely edible; but their eggs afford a very nourishing and wholesome food.

¶ PELECANUS *Bassanus*. The Solan Goose, or Gannet. This has a strong fishy taste; but is nevertheless much relished in Scotland

¶ LARUS *marinus*. The Black backed Gull. The young of this and several other species of larks, are edible; but their flesh has a disagreeable fishy taste.

IV. GRALLÆ. *Scolopaceous Family*.

The flesh of most of the genera of this order is edible, and highly savoury. Among the foreign genera, the PHÆNICOPTERUS *ruber*, the FLAMINGO and TANTALUS *Loculator, ruber, &c.* Wood Ibis, Scarlet Ibis, &c. are esteemed great delicacies.

SCOLOPAX. The flesh of most of the species of this genus, is exceedingly savoury, and moderately stimulant, and is moreover sufficiently light and digestible. This is particularly applicable to the following well known species:

SCOLOPAX *rusticola*. The Woodcock.

———— Gallinago. The Snipe.

———— Gallinula. The Gid, or Jack Snipe.

———— Glottis. The Great Plover, or Green Shank.

———— Totanus. The Spotted Snipe.

———— Limosa. The Stone Plover, or Lesser Godwit.

———— lapponica. The Red Godwit.

Somewhat similar to the preceding in flavour

(but not so highly palatable) and stimulant quality, are the

- TRINGA *pugnax*. The Ruff and Reeve.
——— *Vanellus*. The Lapwing, or Bastard Plover.
——— *Cinclus*. The Purre.
——— *Squatarola*. The Grey Plover, or Grey Sandpiper. The eggs of some of these species of tringa are much sought after; but there is no reason to suppose they are in any respect superior to the eggs of the common hen.

Also the

- CHARADRIUS *Morinellus*. The Dotterel.
——— *Pluvialis*. The Green, or Golden Plover.
——— *Ædicnemus*. The thick kneed Bustard, or Stone Curlew.
——— *Himantopus*. The long legged Plover.

Many species of the following genus afford a fine-flavoured food, not very different in its qualities from that of the anserine tribe.

- FULICA *fusca*. The Brown Gallinule.
——— *chloropus*. The common Water Hen, or Moor Hen.
——— *Porphyrio*. The Purple Water Hen, or Purple Gallinule.

Several species of the Rallus, or Water Rail, are in like manner a well tasted, stimulant and sufficiently digestible food.

V. GALLINÆ. *Gallinaceous Family.*

PAVO cristatus. The Peacock. The young peahen is much the same in taste and other qualities with the pheasant, to which, however, it is inferior.

MELEAGRIS Gallopavo. The Turkey. The white meat upon the breast of this bird is justly reckoned a great delicacy. It is very light and nutritious, and but little stimulant; it is therefore an excellent food for weak people.

Similar in flavour and other qualities to the preceding, is the flesh of the

PENELOPE cristata. The Guiana Quail.

CRAX Alector. The crested Curassow.

PHASIANUS Gallus (domesticus) *Gallus* et *Gallina*.
The Dunghill Cock and Hen.

The flesh of the last-mentioned bird affords a well known delicate and wholesome food. The young bird, or *Chicken* (*pullus gallinaceus*) and the *Capon* (*gallus castratus*) are most esteemed. Both are very nutritive and easily digested. *Chicken Broth* (*jus gallinaceum*) is diluent and restorative, and is a very useful drink in cholera, diarrhœa, and other disorders of the stomach and bowels. The concentrated decoction yields an excellent jelly.

It belongs to this place to take notice of the alimentary properties of *Eggs* (*ova*).

The fluid contents of an egg consist of the *White* (albumen) and the *Yolk* (vitellus). The former has a great affinity to the coagulable part of the blood, and the curdy part of milk. The latter, viz. the yolk, is composed of oil, coagulable or albuminous matter, water and a small proportion of gelatine. It is miscible with water, so as to form an emulsion. The *oil* (oleum ovorum) is separable from the yolk, boiled till it becomes hard, by means of pressure.

The eggs of all granivorous birds, and especially of the domestic fowl, yield a mild, demulcent, and strengthening aliment, well suited to consumptive persons, and such as are exhausted by immoderate evacuations. Raw eggs are gently laxative, and are found to be serviceable in cases of jaundice and obstructed liver (*White on the Management of Pregnant and Lying-in Women*, p. 74. Also *Schwartz de Curatione Icteri per Vitellum Ovi* 1791). A nutritive restorative drink is prepared by rubbing the yolks of two or three eggs, and a little white sugar, with a pint or two of cold water, adding to it afterwards a glass of Rhenish or any other light wine, with or without a little lemon juice, to improve the flavour. This *Egg-emulsion* (emulsio ovi vel lac pulli) without the wine, is a good remedy in coughs, hoarsenesses, spitting of blood, costiveness, &c.

Both the white and yolk of egg are rendered less digestible to the generality of stomachs when boiled to hardness. There are however instances of labouring people, and persons who use violent

exercise, with whom eggs, hardened by boiling or frying, agree better than in the soft or liquid state. But, generally speaking, the lightest as well as the simplest mode of preparing them for the table, is to boil them only as long as is necessary to coagulate slightly the greater part of the white, without depriving the yolk of its fluidity. The art of cooking presents various combinations of eggs for the table; the combination with milk is as palatable and nutritious as any.

PHASIANUS colchicus. The common Pheasant. A well known delicacy. Its flesh is tender, nutritious, and readily soluble in the stomach.

NUMIDA Meleagris. The Guinea-Hen. In flavour and digestibility resembling the flesh of the pheasant, but somewhat inferior:

TETRAO Urogallus. The Cock of the Mountain.
Coq de Bruyere.

———— *Tetrix.* The Black Cock. Black Game or Black Growse.

———— *Scoticus.* Red Game. Red Growse.

———— *Lagopus.* The Ptarmigan or White Game.

The flesh of these species of Tetrao, and especially of the last two, is savoury and sufficiently digestible; but it is neither so tender nor so finely flavoured as that of the

TETRAO Ferdix. The common Partridge, which,

of all game, not perhaps excepting the pheasant, is the lightest, the least stimulant, and the most nutritious.

Inferior in flavour and other qualities to the preceding species, is the

¶ *TETRAO Coturnix*. The Quail. This bird is fond of hellebore-seeds, and the seeds of the lolium temulentum. Hence it is proper to have the stomach and intestines thoroughly drawn out of it before it is dressed, otherwise the juices of those noxious seeds might occasion sickness, vomiting, convulsions, and other distressing symptoms, to those who eat thereof.

VI. PASSERES. *Passerine Family*.

COLUMBA domestica. The Common Pigeon.

———— *Palumbus*. The Ring Dove.

The flesh of these and other species of columba, is savoury, but exceedingly stimulant. On this last account these birds are an improper food for invalids, with the exception of leucophlegmatic and scrophulous subjects.

ALAUDA. The Lark. All the different species of this genus furnish a delicate and light food.

TURDUS viscivorus. The Missel Thrush.

———— *pilaris*. The Fieldfare.

———— *Merula*. The Black Bird.

The flesh of these and other species of turdus,

is tender, savoury, and sufficiently digestible. In hard winters, when these birds are compelled to feed upon the berries of the missletoe, ivy, holly and spindle tree, (*evonymus europæus*) their flesh becomes bitter, and acquires a purgative property.

LOXIA Curvirostra. The Sheldapple, or Crossbill.

———— *Coccothraustes*. The Grosbeak, or Hawfinch.

———— *Chloris*. The Greenfinch.

The flesh of these and other species of this genus, is sufficiently palatable and digestible.

EMBERIZA nivalis. The Snow Bunting.

———— *Miliaria*. The Bunting. These birds are well flavoured. The

EMBERIZA Hortulana. The Ortolan is a well known delicacy. This bird is sometimes little more than a ball of fat, and hence if eaten freely proves oppressive to the stomach. The island of Cyprus (according to *Mariti*) is famous for ortolans and beccaficos (*motacilla ficedula*.) Many thousands of these birds are exported from thence annually. The peasantry have a method of pickling them, in which state they will keep for a whole year. The

EMBERIZA Citrinella, Yellow Hammer; and

———— *oryzivora*. Rice Bird, or Rice Bunting; are also palatable birds, especially the latter, which, when fattened by feeding upon rice or maize,

is highly esteemed in the West Indies and some parts of North America.

¶ *FRINGILLA cælebs*. The Chaffinch.

————— *Montifringilla*. The Brambling, or Bramble Finch.

————— *domestica*. The House Sparrow.

————— *montana*. The Tree Sparrow.

The flesh of these, and other species of the finch-tribe, is neither very palatable nor very tender. Some of them have a bitter taste.

MOTACILLA modularis. The Hedge Sparrow.

————— *Ficedula*. The Beccafico or Epicurean Warbler.

————— *Œnanthe*. The Wheat Ear.

————— *Rubetra*. The Whin Chat.

————— *Rubicola*. The Stone Chatter.

————— *Phænicurus*. The Redstart.

————— *Erithacus*. The Redtail.

These and other species of motacilla, afford a sufficiently digestible, and not unsavoury food.

HIRUNDO esculenta. The esculent Swallow. The nests which this species of swallow constructs in the hollows of rocks, of mollusca (sea-worms) and other gelatinous marine substances, bear some affinity to isinglas, and are esteemed a great delicacy by the Chinese, Cochinchinese, and inhabitants of various islands in the Indian ocean. They dissolve them in their broths and soups. According

to *Thunberg* these nests are much eaten by the Javanese. He says they have hardly any taste, but are nourishing and easy of digestion.

C. AMPHIBIA. *Amphibious Animals.*

With the exception of the turtle; the flesh of animals belonging to this class is used rather for medicinal purposes, than for food.

TESTUDO *Mydas*. The Green Turtle. Eaten moderately it proves nutritious, but abounding with fat, it is not very easy of digestion. The soup which is commonly prepared from it, is by reason of the spice which is added to it, exceedingly stimulant; but the simple decoction or broth (*jus testudinis*) is demulcent and restorative, and has been found beneficial in phthisical and hectic cases.

TESTUDO *ferox*. The flesh of this species is said to be better flavoured than that of the preceding. In other respects its properties are the same.

TESTUDO *græca*. The Land Turtle, or Land Tortoise. The flesh of this is somewhat inferior to that of the sea or green turtle; it is much used in Italy and the Levant for making soups and broths. The eggs are nearly as good as hen's eggs, and make excellent omelettes.

¶ RANA *esculenta*. The edible Frog, or Green Water Frog. The white flesh upon the thighs of this species of frog, is much eaten in France,

Italy, and some parts of Germany. It tastes somewhat like the flesh of a chicken; but affords very little nutriment. Frog's broth (*jus ranarum*) is prescribed by the French and Italian physicians in consumptive cases; in which, however, it seems to have no advantages over chicken broth.

¶ *LACERTA agilis*. The common Green Lizard. Much cried up of late years for its dietetical uses in lepra, scrophula, cancer, and lues venerea (*Florès spécifique nouvellement decouvert, &c. Lausanne, 1785*). But from the trials made of it by *Carminati* and others, it appears to have little or no title to medicinal efficacy in those cases.

¶ *LACERTA Stincus*. Eaten by the Ægyptians as a restorative and aphrodisiac. Under the supposition that its flesh possessed alexipharmic properties, it was an ingredient in the old compound preparations which went under the names of *theriaca Andromachi* and *confectio Damocratis*.

¶ *COLUBER Vipera*. The Viper.

——— *Berus*. The Adder. The broth prepared from the flesh of this species of viper (*jus viperinum*) was formerly in high esteem as a restorative (*Juncker de Viperarum usu med. 1744, Oetinger de curis viperinis, 1768*) and is at this time much used by the Italians. But has it any advantage over good beef or hare broth, and some other animal decoctions?

D. PISCES. *Fishes.*

Amid the great variety of fishes, there are many which afford to the human race a good and wholesome aliment. They are, however, inferior in nutritive power to both quadrupeds and birds, as *Haller* and other medical writers have remarked. *Dr. Cullen*, on the contrary, was persuaded that the difference in this respect is very inconsiderable, if any; alledging in support of this opinion that there are several instances of villages in Scotland inhabited almost wholly by fishers, and who therefore live very much upon this sort of aliment, but in whom no diminution of health or vigour appears; and that those who are employed in the herring-fisheries, and who for some length of time live upon herrings alone, seem to be much fattened by this diet. It were to be wished, however, that in the instances he has cited, *Dr. C.* had ascertained that those who support themselves by fishing, do so constantly make the fish which they catch the only or the principal part of their diet; or whether they do not generally reserve as little as possible for their own use, and procure with the money which they get by the sale of their fish to others, a different kind of food for themselves? Or whether if the inhabitants of the villages to which he alludes, do really eat considerable quantities of fish, they do not at the same time consume as much oatmeal and other farinacea as the common people in other parts of Scotland? If so, it is easy to see that the fishers should be stouter than the other inhabitants, as consuming, in addition to the

common vegetable diet of the country, a much larger quantity of animal food. The natives of some parts of North America and of Kamtschatka who subsist chiefly upon fish the year throughout, are certainly not to be compared, either for vigour of body or vigour of intellect, with the inhabitants of Great-Britain, Germany and other European countries, whose animal food is for the most part derived from the quadruped race.

Some who have admitted that the muscular parts of fish are not so nourishing as the muscular parts of quadrupeds and birds, have yet contended that they are more easily digested. From all the observations we have made, we are disposed to adopt a contrary opinion. People who live much on fish are troubled with flatulency, and are frequently affected with disordered bowels and cutaneous eruptions. Being much inferior (especially the white blooded fish) in stimulant properties to the flesh of land-animals, it is found necessary to supply this defect in preparing fish for the table, by means of spices and other condiments. And the putrescent nature of fish, renders it necessary in tropical latitudes, and often during the warmth of the summer season in this climate, to use lemon-juice, vinegar, and other acids with them. These qualities which belong to fishes in general, render them an improper sort of aliment for dyspeptic, gouty and cachectic persons; and it may be doubted whether a fish-diet be suited to any class of invalids. The ancients (at whose table the highest luxury was to have a great variety of rare and costly fish) seem to have been influenced by the prevailing fondness for this kind of food among them, rather

than by accurate observation, when they prescribed a fish diet to many of their patients.—Fishes with red blood seem to be more nourishing than those with white blood; and those which abound in oil, more so than those which do not. The distinctions in regard to salubrity, which some authors have made between sea fish and river fish, are scarcely worth attending to. The former are to be preferred not only as being generally more palatable, but at the same time as being nutritive in a somewhat greater degree.

I. APODES. *Destitute of Ventral Fins.*

MURÆNA *Anguilla*. The common Eel. A richly flavoured and nutritious fish; but on account of the oil with which it abounds, digested with difficulty. When eaten too freely, it occasions nausea, vomiting, diarrhœa, and not unfrequently some degree of fever. It is at all times an improper food for sick persons, for those who are of a bilious constitution, and for such as are troubled with flatulence and indigestion. Vinegar and horseradish form a proper seasoning to make it sit lightly on the stomach. Similar in its properties to the preceding, but (when of a large size) coarser and less digestible (whether fresh or dried) is the

MURÆNA *Conger*. The Conger Eel; and its fry, called *Elvers*.

AMMODYTES *Tobianus*. The Sand Launce, or Sand Eel. In the Isle of Wight, it is called the Sand Sprat, and is in much esteem (*Worsley's His-*

tory of the Isle of Wight, p. 4). It should be eaten sparingly, being not very readily dissolved in the stomach.

Most of the other genera of the order Apodes, are edible; but, except the STROMATEUS, afford a coarse and not very digestible food, rejected where daintier fish can be had.

II. JUGULARES. *With Ventral Fins placed before the Pectoral Fins.*

CALLIONYMUS *Lyra*. The Gemmeous Dragonet.

————— *Dracunculus*. The sordid Dragonet.

These species of callionymus afford a white and palatable meat.

TRACHINUS *Draco*. The Weaver. Affords a fine flavoured meat, firm, but tender. The Italians reckon it a great delicacy; and M. Duhamel calls it *l'honneur des bonnes tables*.

GADUS *Æglefinus*. The Haddock. Meat dense, well tasted, and sufficiently digestible. Dried haddock, like all other dried fish (with the exception of some very oily fish) is neither very digestible nor very nutritive.

GADUS *Callarias*. The Torsk. Affords a white, palatable and digestible food.

GADUS Morrhuæ. The Codfish. Fresh cod is a palatable, sufficiently digestible, and not unwholesome food. The sounds and other gelatinous parts are much esteemed; but they are not so readily dissolved in the stomach as the other parts. By drying and salting, this fish loses much of its nutritive properties.

The following other species of this genus, afford, when fresh, a sufficiently wholesome and nourishing food, viz.

- GADUS barbatus*. The Pout.
- *Merlangus*. The Whiting.
- *Pollachius*. The Pollack.
- *Molva*. The Ling.
- *Lota*. The Burbot.

III. THORACICI. *With Ventral Fins under the Pectoral Fins.*

ZEUS Faber. The Dory. Savoury and sufficiently digestible.

PLEURONECTES Hippoglossus. The Holibut. That part which adheres to the side-fins, is esteemed a delicacy; it abounds in oil, but it is not very readily dissolved in the stomach.

- PLEURONECTES Platessa*. The Plaise.
- *Flesus*. The Flounder.
- *Limanda*. The Dab.
- *Solea*. The Sole.
- *maximus*. The Turbot.

All these species of pleuronectes, and especially the last of them, are a savoury, nutritious, light, and wholesome food.

CHÆTODON *rostratus*. The Jaculator.

CHÆTODON *Imperator*. The Emperor of Japan; and other species of this genus, are savoury and delicate.

¶ SPARUS *Mæna*, and other species of sparus, are palatable; but sometimes prove purgative, and disorder the stomach and bowels.

PERCA *fluviatilis*. The Perch. Firm, palatable, and readily digestible. These properties belong more or less to most of the other species of this genus.

SCOMBER *Scomber*. The Mackarel. Savoury, but not very readily dissolved in the stomach. It is not a wholesome fish.

¶ ——— *Thynnus*. The Tunny. A coarse fish; but when pickled much eaten by the common people at Nice and other parts of the Mediterranean coast.

The Cavallee of *Browne*, a species of Scomber found in the West Indies, possesses poisonous qualities.

MULLUS *barbatus*. The Red Surmullet.

——— *Surmuletus*. The Striped Surmullet.

Finely flavoured, and almost as much esteemed in these days as they were in the times of ancient Rome. The head is reckoned the finest part. It is sufficiently digestible.

TRIGLA *Lyra*. The Piper. Well flavoured, but somewhat hard, and not very digestible. The other species of this genus are for the most part coarse and heavy.

IV. ABDOMINALES. *With Ventral Fins behind the Pectoral Fins.*

COBITIS *Barbatula*. The Loach, or Groundling. Palatable and sufficiently light fry.

SALMO *Salar*. The Salmon. A well known delicacy; it is very nutritious; and though it abounds in oil, it is, in moderate quantities, sufficiently digestible. The *pickled* fish is very unwholesome food.

SALMO *Trutta*. The Sea Trout, or Bull Trout. Much inferior to, and less digestible than the preceding species.

SALMO *Fario*. The Trout. By far the best of all fresh water fishes. It is tender, exquisitely flavoured, and readily digested.

SALMO *alpinus*. The Charr. Similar in its properties to the last.

SALMO *Salvelinus*.

SALMO *Salmarinus*. The Salmon Trout.

—— *Umbla*. These species are similar, but inferior, in flavour and other qualities to the salmon.

SALMO *Eperlanus*. The Smelt. Palatable but not very nutritive.

SALMO *Albula*. The Whiting. Neither very palatable, nor very wholesome.

SALMO *Thymallus*. The Grayling. The meat of this fish is white, firm, and delicate. It is sufficiently digestible and wholesome.

ESOX *Lucius*. The Pike. Firm, palatable, and sufficiently digestible, provided it be not too large and too old. It is a wholesome fish.

MUGIL *Cephalus*. The Mullet. Much relished by many people, though it is not very readily digested, and is not a very wholesome fish. It is from the roe of the female mullet that the Italians prepare their favourite food *botargo*, which is also a frequent article of diet with the Turks.

CLUPEA *Harengus*. The Herring.

—— *Sprattus*. The Sprat.

—— *Alosa*. The Shad.

—— *Encrasicolus*. The Anchovy.

These species of clupea abound in oil. When fresh, they have a pleasant taste, and are considerably nutritive; but they do not agree with people

E



who are bilious. By salting, they lose much of their alimentary properties, and become difficultly digestible. The Anchovy is only eaten as a condiment.

¶ CYPRINUS *Barbus*. The Barbel. A coarse, unwholesome fish.

CYPRINUS *Carpio*. The Carp. A sweet, nutritive, and sufficiently digestible food. The decoction or broth of this and the following species, is esteemed a restorative, and as such is prescribed by the French and Italian physicians in consumptive and other disorders.

CYPRINUS *Gobio*. The Gudgeon. Sufficiently palatable and digestible.

¶ CYPRINUS *Tinca*. The Tench. Soft and slimy, and difficultly digestible.

¶ CYPRINUS *Cephalus*. The Chub. A coarse fish.

CYPRINUS *Leuciscus*. The Dace. More palatable and more readily digested.

CYPRINUS *rutilus*. The Roach. A light, palatable and wholesome fish.

CYPRINUS *erythrophthalmus*. The Rud. Similar to the last-mentioned.

The two following species, though they are much

inferior to the preceding, are sometimes brought to the table, viz. the

CYPRINUS *Alburnus*. The Bleak ; and
———— *Brama*. The Bream.

V. BRANCHIOSTEGI. O.

VI. CHONDROPTERYGII. *With Cartilaginous Fins.*

ACIPENSER *Sturio*. The Sturgeon. The meat of this fish is nutritive, but not very savoury. *Caviar* is prepared from the roe of this and the following species. This preparation was known to the ancients, and was by them called *Garum*. The Russians and Turks are particularly fond of it.

ACIPENSER *Ruthenus*. The Starlet. The meat of this is more tender and delicate than that of the preceding.

ACIPENSER *Huso*. The Isinglas Fish, or Isinglas Sturgeon. The most valuable part of this fish is the sound, or air-bladder, from which is prepared *Fish-glue*, or *Isinglas* (Ichthyocolla). Gelly made by dissolving isinglas in a proper quantity of water, is nutritive and demulcent, but is neither so palatable nor so light as chicken or calves-feet gelly. (Isinglas is also prepared from the ACIPENSER *Sturio*, ACIPENSER *stellatus*, and other species of this genus.)

RAIA *Batis*. The Skate. Coarse, but nutri-

tive. The same may be said of the other edible species of this genus.

PETROMYZON *marinus*. The Lamprey.

————— *fluviatilis*. The lesser Lamprey.

————— *branchialis*. The Lampern, or Pride. These are esteemed great delicacies. They are very savoury, but not very digestible. They not unfrequently occasion fetid eructations and diarrhœa to those who eat freely of them.

E. INSECTA. *Insects*.

Of this class of animals, none besides those which belong to the genus cancer, are eaten by civilized nations. They seem to be not only less digestible but also less nutritious than many kinds of fish.

I. COLEOPTERA. O. II. HEMIPTERA. O.

III. LEPIDOPTERA. O. IV. NEUROPTERA. O.

V. HYMENOPTERA.

APIS *melifica*. The Honey Bee. *Honey* (mel) is the nectarious juice sucked up by the bee from various sorts of flowers, and afterwards ejected from the insect's stomach and deposited in the cells of the comb. During its retention in the stomach, it appears to undergo a chemical change. It agrees in its general alimentary properties with sugar,—which see. It should however be noticed, that it is more stimulant, and that it is apt to pass

off more readily by stool and urine, than the crystallized juice of the cane. With the ancients, honey supplied the place of sugar, as, indeed, it does even at this day in the interior of Russia and Poland. They used it in all their sweetmeats and pastry, and it was a common addition to milk. They thought it particularly salutary to persons advanced in years. Diluted with water, and subjected to a proper temperature, it is like sugar, susceptible of the vinous fermentation, yielding what is called *Mead* and *Metheglin*. The ancients had various preparations of honey diluted with water, (see *Melicratum* and *Hydromel*), and with vinegar (*Oxycraton* and *Oxymel*); of all which preparations the medical uses will be mentioned hereafter.

VI. DIPTERA. O.

VII. APTERA.

CANCER *Mænas*. The common Crab.

——— *Pagurus*. The Black-clawed Crab.
The meat within the claws of these two species is coarser and less sapid than that of the

CANCER *Gammarus*; or Lobster, which is a very palatable, moderately nutritive, but not very digestible food. The decoction or broth of this and the following species (previously bruised or pounded the shells and eatable parts together) is esteemed demulcent, alkalescent, and nutritious. In some countries it is prescribed as a restorative in cases of emaciation, whether with or without hectic fever. From every species of the cancer genus, dys-

petic, gouty and bilious people should rigidly abstain.

CANCER *Astacus*. The Craw Fish. Similar in nutritive properties to the preceding.

CANCER *serratus*. The Prawn. Esteemed a great delicacy. In its general properties similar to the preceding ; as are likewise the following, viz.

CANCER *Crangon*. The Shrimp ; and
——— *Squilla*. The white Shrimp.

With respect to the digestibility of the different species of cancer, there is, as Dr. *Cullen* has remarked (*Mat. Med.* Vol. I. p. 393) something peculiar. He knew several instances of persons who could not take even a very small quantity of lobster or crab, without being affected soon after with a violent colic, and sometimes with that same efflorescence on the skin (See *Winterbottom* on the Urticaria or Nettlerash from this cause, in *Medical Facts and Observations*, Vol. 5.) which often happens from eating salmon or herrings. In both cases, these effects are, he thinks, to be ascribed to peculiarity of constitution, difficult to be accounted for.

F. VERMES. *Worms*.

Most of the animals belonging to this class, and especially those of the order testacea, abound in mucus, and in consequence afford a mild, demulcent sort of food, suited to cases of atrophy

and phthisis. Some of them, however, should be eaten with caution, particularly at certain seasons of the year.

I. *INTESTINA*. *Long Worms. Without conspicuous limbs or external members.* O.

II. *MOLLUSCA*. *With external members, but without a shelly covering.*

LIMAX rufus. The Red Slug. Coincides in alimentary and medicinal properties with the snail, (*Helix Pomatia*) which see.

The *SEPIA sepiola*, and *ECHINUS esculentus*, are almost the only other edible genera of this order of worms; and even these are a difficultly digestible, and by no means a wholesome food.

III. *TESTACEA*. *With Shelly Coverings.*

CARDIUM edule. The common Cockle. Palatable and nutritious, but inferior in these respects to the

OSTREA edulis. The common Oyster; which as a delicacy and an aliment, far surpasses all the rest of the testaceous kind. Most people prefer eating oysters raw, and as fresh as possible, that is while they are alive. In this state they agree very well with strong stomachs, but by no means so with persons who are subject to indigestion; and dyspeptic and gouty persons who have ventured to

swallow them in this state, have often been violently disordered by them. Such persons, if they eat them at all, should have them well stewed and seasoned with some aromatic. But even in that state, they should be eaten rather sparingly in the instances above mentioned. Oysters are often recommended to consumptive patients; but if they are salutary to them, they are not so to those who are affected with glandular obstructions, whether external or mesenteric.

MYTILUS edulis. The eatable Mussel. In alimentary properties, mussels are similar to oysters; but, at certain seasons of the year, and in particular constitutions, mussels produce distressing, and sometimes dangerous symptoms in those who eat them; such as a burning sensation in the fauces, swelling of the face, eyes, lips, tongue, and throat; distension of the stomach; erysipelatous inflammation of the skin, accompanied with intolerable itching; difficulty of breathing, great anxiety, and in a few instances, convulsions. The remedies on these occasions are vomits and acids, particularly lemon juice, mixed with peppermint water. The occasional noxious quality of the mussel, is derived from a small species of stella marina (viz. the *ASTERIAS ophiura*) which in the months of June, July, and August, is found in the shell of the mussel. The juice of this sea-star is highly acrid and injurious. It is said that the mussels may be completely freed from this noxious accompaniment, by washing them well in vinegar and water. *Behrens de Affectionibus a Comestis Mytulis apud Werlhof Opera. Morhring de Mytulor.*

Veneno apud *Halleri* Disputation. ad Morb. Hist. et Curat. Tom. III. Also *Beunie* in the 3d Vol. of the Lond. Med. Journal.

HELIX *Pomatia* (*COCHLEA terrestris*). The eatable Snail. Slimy and lightly nutritious.

According to Dr. *Cleghorn* this sort of snail abounds in Minorca, and is a great resource to the poorer inhabitants, who eat them boiled, after having been kept within doors long enough to lose their earthy taste. In this manner they are also much eaten in Austria and Switzerland, where they supply the place of oysters. In the last-mentioned country they are reared in gardens, with walls and mounds constructed for the purpose, as was indeed the custom with the ancients. The decoction or broth (*jus cochlearum*) made from the snails and shells pounded together is esteemed demulcent and restorative, and is accordingly prescribed in consumptive cases.

2. From the Vegetable Kingdom.

Vegetables are nutritive in proportion as they abound in mucilage, in oil,* in sugar, in starch, and in gluten. These nutrimental parts of vegetables correspond to the mucus, fat, saccharine matter,† gelatine and albumen of animals. In both classes of living matter the nutrimental parts appear to consist of the same principles differently

* That is to say in bland or fixed oil.

† Contained in Milk.

modified, or combined; but the modification under which they exist in the animal kingdom, is that which affords the strongest and most stimulant nourishment to man.

As vegetable aliment is less stimulant than animal food, and as besides it passes off more readily by the different outlets of the body, it is very properly prescribed in all inflammatory disorders; in cases of phlethora and obesity; in cases of hepatic and other visceral obstruction. Being less putrescent than animal food, it is especially suited to the prevention and cure of scurvy; and there are observations which render it probable that those who live chiefly on a vegetable diet are little liable to typhus and other malignant fevers. Lastly, as vegetable aliment is less stimulant than animal food, it is on that account more favourable to longevity.

On the other hand, being less readily assimilated than food derived from the animal kingdom, being apt to produce flatulency and acidity, and having a tendency to pass off very readily by stool and urine; a vegetable diet is ill suited to dyspeptic persons, and to those who in consequence of profuse evacuations or exhaustion from other causes, require a rapid and copious supply of chyle.

With regard to the relative nutrimental powers of vegetables, the seeds of certain plants belonging to the natural order gramina, and the leguminous family of plants, claim the first rank. Close to these may be placed certain roots, which abound

in starch and mucilage, such as the potatoe, yam, the cassava-root and the different species of orchis; to which add the pith of certain plants belonging to the natural order palmæ, and the gum which exudes from the *mimosa nilotica*, the *astragalus tragacantha*, &c. In the next degree may be placed those vegetable substances which abound in sugar as well as mucilage, such as the beet and carrot. (not to mention the sugar-cane itself); together with the sweet and acido-dulcescent fruits, such as grapes, dates, apricots, plums, apples, &c. Lastly, certain oily seeds, such as the almond, chestnut, filbert, &c.

A. HERBÆ. *Herbs.*

APIUM Petroselinum. Pentandria Digynia. Umbellatæ. Grows wild in Sardinia. (*Petroselinum*). Parsley. A common addition to broths and soups. The roots and leaves are slightly aromatic, the seeds more so. The former (and especially the roots of the Dutch parsley) are sweet and nutritive, the latter, viz. the seeds, diuretic. From these last a butyraceous essential oil may be obtained by distillation. Sugar may be extracted from the roots. Many of the foreign pharmacopœias contain a water distilled from the fresh herb (*Aqua Petrosellini*) which, however, is justly exploded from our dispensatories. As an aromatic, it is much inferior to mint-water, and as a diuretic it is of no value.

APIUM graveolens. Class and order as above. Indigenous. Smallage.—Celery. This is one among many instances of a plant naturally acrid and

unfit for food, being rendered mild and alimentary by cultivation. The blanched stalks are mucilaginous and somewhat aromatic, and, especially when stewed, lightly nutritive. Like the former species, it is ranked in the number of diuretics, and by some writers has been commended, but without reason, as a lithontriptic.

ASPARAGUS officinalis. Hexandria Monogynia. Sarméntacæ, *Linn.* Liliacæ, *Murray.* Indigenous. Asparagus. A light nutritive vegetable. It is mucilaginous, and considerably diuretic. As it is quickly dissolved in the stomach, and is little disposed to create flatulence, it is in general well suited to weak constitutions. It is not, however, destitute of stimulant properties, and hence it has been found hurtful in cases of pulmonary and uterine hemorrhage. Whether from peculiarity of constitution, or from some other cause, I know not, but a young person who partook of asparagus for 2 or 3 days in succession, was seized with vomiting and pain of the bowels, accompanied with a considerable acceleration of the pulse.—Recent chemical analysis has shewn that this vegetable contains a crystallizable substance, peculiar to itself.

BRASSICA oleracea. Tetradynamia Siliquosa. Siliquosæ. Indigenous. Colewort and Cabbage. The different species and varieties of brassica afford, for the most part, but little nourishment. They are watery, and liable to produce flatulence and colic. The least flatulent is the *Cauliflower*. The large headed cabbage cut into thin slices and put into casks with alternate layers of salt, with or without

the addition of carraway or other aromatic seeds, then pressed close together, and afterwards set to ferment, constitutes what is termed by the Germans *Sauer Kraut*. In consequence of the fermentation it undergoes, it partakes in some degree of a vinous nature, is savoury, and sufficiently digestible. In his voyages, Captain *Cook* found it to be one of the best antiscorbutics; and *Lind* recommends it as such. What makes it preferable to many other remedies of this sort, is, that it will keep for a twelve month and upwards without spoiling.

CICHOREUM Endivia. Syngenesia Polygamia Æqualis. Compositæ Semiflosculosæ. China and Japan. Endive. This is a bitter, wholesome vegetable, though it affords but little nourishment.

CRAMBE maritima. Tetradynamia Siliquosa. Siliquosæ. Indigenous. Sea Cole-wort. Sea Kale. The blanched stalks are dressed and eaten in the same manner as asparagus, to which, however, they are much inferior.

CYNARA Scolymus. Syngenesia Polygamia æqualis. Compositæ Capitatæ. Italy and the Southern parts of France. The common Artichoke. The only alimentary part, says *Cullen* (Mat. Med. Vol. 1. p. 266) of this acrid plant, is the receptacle of the flower, and the portion of that which we pull away from it, in pulling away the separate squamæ of the calyx. The whole of this receptacle, even in its recent state, is of very little acrimony, and by being boiled in water, is rendered perfectly mild. In its

boiled state, it is of a tender texture, somewhat sweet and mucilaginous, and therefore tolerably nourishing. It is diuretic, and as such it is deemed salutary in dropsical cases.

LACTUCA sativa. Syngenesia Polygamia Æqualis. Compositæ Semiflosculosæ. The garden Lettuce. This plant takes its name from the milky juice which it contains. Many varieties of it are cultivated in the kitchen-gardens; it is only the *LACTUCA virosa*, and *L. Scariola* that possess noxious properties. Without the addition of other herbs it affords but an insipid sallad. It is more digestible when boiled than in its crude state. It is diuretic and slightly soporific. Will this account for its reputed anti-aphrodisiac properties? *Linnaeus* de *Acetariis* apud *Amæn.* Acad. Vol. 4.

LEPIDUM sativum. Tetradynamia Siliculosa. Siliquosæ. (*Nasturtium hortense*). Garden Cress. This is one of the earliest spring vegetables. It has a pungent and somewhat bitter taste. Hence it operates in some degree as an aromatic, and promotes digestion, &c. *Lind* found it useful in scurvy.

PORTULACA oleracea. Dodecandria Monogynia. Succulentæ. East and West Indies. Garden Purslane. This herb yields a watery, sharp, and somewhat saline juice. It is but little nutritive, and proves laxative when eaten too freely.

RUMEX Acetosa. Hexandria Trigynia. Holoraceæ. Indigenus. (*Acetosa*). Common Sorrel. This

palatable vegetable contains an essential salt, which is similar to the acid of tartar, and may serve as a substitute for it. [It contains oxalic as well as tartaric acid]. It is much used in France and other countries as a sauce. The expressed juice is employed as a preservative against the scurvy, in sea-voyages.

SISYMBRIUM Nasturtium. Tetradynamia Siliquosa. Siliquosæ. Indigenous. (*Nasturtium aquaticum*). Water Cress. This plant has a pungent, bitter taste. *Boerhaave* and *Wiegleb* obtained volatile alkali from it. As an antiscorbutic, it is much inferior to scurvy-grass. It is eaten raw as a sallad herb. By boiling, its aromatic and other properties are destroyed. The expressed juice is an ingredient in the *Succus Cochleariæ compositus* of the Lond. and Edin. pharmacopœias. See STIMULANTS.

SPINACIA oleracea. Dioecia Pentandria. Holoraceæ. Spinage. This herb affords but little nourishment. It is apt to occasion flatulency.

B. RADICES. *Roots.*

ALLIUM ascalonicum. Hexandria Monogynia. Liliaceæ. (*Cepa ascalonica*). The Shallot.

———— *Cepa* (*Cepa*). The Onion.

———— *Porrum* (*Porrum*). The Leek.

———— *sativum* (*Allium*). Garlic.

———— *Scorodoprasum* (*Scorodoprasum*). Roccambole.

All these different species of *allium* coincide in

their general properties. The *Shallot*, *Garlic*, and *Roccambole*, are too acrid to be used otherwise than in small quantities, by way of sauce or condiment; but the *Onion* and *Leek*, when deprived of their acrimony by boiling, become considerably nutritive. Both are common ingredients in broths and porridge; and the roasted onion is a favourite food with many people. The onion, garlick and leek are diuretic and expectorant, (see *Expectorants* and *Diuretics*) and on these accounts they are often recommended as articles of diet to dropsical and asthmatic patients.—Dr. Rush, in his account of the yellow fever of Philadelphia says, he is disposed to believe that garlick was the only substance that was in any degree useful in preventing that disorder. He met with several persons who chewed it constantly, and who were much exposed to the contagion, without being infected. He further remarks that *Degner* mentions that the Jews (who it is well known eat great quantities of garlick) escaped the malignant dysentery which raged at Nimeguen in 1736.

BETA vulgaris. Pentandria Digynia. Holoraceæ. Red Beet. Southern parts of Europe. The root of this and the following species abounds in saccharine matter (as shewn by *Margraaf* and subsequent chemists) and is considerably nutritive; but in most stomachs produces flatulency when eaten in any considerable quantity. It should be boiled till it becomes quite tender.

BETA Cicla. Class and order as above. White Beet. Coincides in alimentary properties with the

preceding. The mangel wurzel or root of scarcity is a variety of the white beet.

BRASSICA Rapa. Tetradynamia Siliquosa. Siliquosæ. (Rapum). The Turnip. The roots of the different species of this vegetable duly prepared by cookery afford a light and wholesome nourishment. The expressed juice is of a mucilaginous demulcent nature, and is recommended by *Van Swieten* and *Rosenstein* in hoarseness and phthisical cases.

CEROPEGIA bulbosa. Pentandria Monogynia. Contortæ. East Indies. The roots of this plant are eaten in some parts of India. Their taste is similar to that of the turnip. See *Roxburgh's* Plants of the Coast of Coromandel.

CICHORIUM Intybus. Syngenesia Polygamia æqualis. Compositæ Semiflosculosæ. Indigenous. Sucory. The wild plant is considerably more bitter than the cultivated one. The fresh root is put into broths and decoctions, and the young herb is eaten in sallads. The roots, dried and roasted, are very generally used in Germany as a substitute for coffee. In some of the foreign pharmacopœias, there is a *Syrupus de Cichoreo cum Rheo*, intended as a laxative for infants. But an infusion of rhubarb alone, sweetened with sugar, at the same time that it is a more simple, is in other respects a much better preparation.

CONVOLVULUS Batatas. Pentandria Monogynia Campanacæ. East and West Indies. Spanish Potatoe. In alimentary properties this root agrees

with the common potatoe. It is, however, less palatable on account of its sweetness; and, upon the whole, is perhaps not so proper as a principal and constant article of food, as the *solanum tuberosum*; which see.

<i>Dioscorea alata.</i>	} Yams.
————— <i>bulbifera.</i>	
————— <i>sativa.</i>	

Dicœcia Hexandria. Sarmentaceæ. East and West Indies.

These roots, when well boiled or roasted, are very mealy and nutritious. They resemble the potatoe; but are much sweeter, and consequently to European palates not so pleasant. They constitute the chief food of the Negroes in the West Indies.

DAUCUS Carota. Pentandria Digynia. Umbellatæ. Indigenous. The Carrot. This root abounds in a mucilaginous, saccharine juice. It is considerably nutritive; and when sufficiently boiled, as little flatulent as most of the esculent roots. When eaten freely, it proves laxative.

HELIANTHUS tuberosus. Syngenesia Polygamia frustranea. Compositæ oppositifoliæ. Brasil. Jerusalem Artichoke. The knots or tubercles of these roots, when baked, roasted, or boiled, afford a sweet, mucilaginous and wholesome sustenance. Linnæus' (Amœn. Acad. Vol. vii.) preferred the

Jerusalem artichoke to the potatoe, against which he had a botanical prejudice; but it is certainly inferior to the last in nutrimental power, and to most persons in this country it is less palatable.

JATROPHA <i>Manihot</i> .	} Monœcia: } Monadelphia. } Tricoccæ.
———— <i>Janipha</i> .	

South America. Bitter and Sweet Cassava. It is from the roots of these shrubby plants that the amylaceous substance called *tapioca* is prepared. Diffused in boiling water and sweetened with sugar (with or without a small addition of wine, according to circumstances) it constitutes a mild and light article of diet for the sick and convalescent.

MARANTA *arundinacea*. Indian Arrowroot. See DEMULCENTS.

ORCHIS *mascula*. Gynandria Diandria. Orchideæ. Indigenous. Salep. It is from the root of this and other species of this genus, that the sweetish, mucilaginous, and highly nutritive powder, called *Salep*, is prepared. It is suited to the same cases as *tapioca*. For other remarks concerning the medicinal uses of *Salep*, see DEMULCENTS.

PASTINACA *sativa*. Pentandria Digynia. Umbellatæ. Indigenous. Parsnip. This root abounds in saccharine matter, and is considerably nutritious; but its flavour is less pleasant than that of the carrot; on which account the latter is in more general use. The young roots of the parsnip are to be preferred. In some soils it would appear that

the roots of this plant acquire a degree of acrimony.

RAPHANUS sativus. Tetradynamia Siliquosa. Siliquosæ. China and Japan. The Radish. Of this there are several sorts, differing in colour and shape of the roots. All of them are warm and acrid to the taste. They abound in water, afford little nourishment, and in many constitutions produce flatulence and indigestion.

SCORZONERA hispanica. Syngenesia Polygamia Æqualis. Compositæ Semiflosculosæ. Spain and Southern parts of Europe. Viper's-grass. Mucilaginous and slightly nourishing.

Sium Sisarum. Pentandria Digynia. Umbellatæ. China. Skirret. This root, as appears from the experiments of *Marggraf*, abounds in saccharine matter. It is considerably nutritive, and, when boiled, readily digestible. *Linnaeus* expresses much surprise that this palatable and nutritious root is not more generally cultivated.

SOLANUM tuberosum. Pentandria Monogynia. Luridæ. Peru. The Potatoe. Except the cerealia, few vegetables are in such general use as this. As an article of sustenance, the potatoe has two excellent recommendations, it is palatable, and requires little trouble in its cookery. It abounds in amylaceous matter, and when of a good quality, and properly boiled or roasted, affords a very wholesome food, little liable to produce flatulence. *Linnaeus* entertained strong prejudices against this va-

luable root, which however is never unsalutary except when produced in a bad soil or damaged by keeping.

TRAGOPOGON *porrifolium*. Syngenesia Polygamia Æqualis. Compositæ Selniflosculosæ. Indigenous. Salsafi. This root contains a sweetish milky juice. In its general properties, it resembles the scorzonera, and like it, is but slightly nutritious.

C. FRUCTUS. *Fruits.*

ARTOCARPUS *incisa*. Monoëcia Monandria. South Sea Islands and East Indies. The Bread Fruit-tree. The fruit of this tree, which may be said to surpass all other vegetables in point of *immediate* utility (as it requires so little pains in respect both of its culture and preparation for food) is used before it ripens, in which state it is roasted till the outside becomes scorched and black. The outer part is then rasped off, and the inner part, which is soft and white, like the crumb of new bread, is used for food. It is very wholesome and nutritious; but in taste comes nearer to a sweet potatoe or Jerusalem artichoke, than to wheaten bread.

AMYGDALUS *Persica*. Icosandria Monogynia. Pomaceæ. Asia. The Peach and Nectarine. These well-known palatable fruits are sufficiently wholesome, when eaten moderately; but if taken too freely or while the body is heated, they sometimes (especially peaches) disorder the bowels. Gouty people should eat of them sparingly.

ANNONA muricata. Polyandria Polygynia. Coadunatæ. West Indies. Common Custard Apple or Sour Sop. This and some other species of *annona*, are a cooling, agreeable and wholesome fruit.

BERBERIS vulgaris. Hexandria Monogynia. Barberry. The berries of this shrub abound in an acid (the malic acid—the bark of the barberry yields oxalic acid); and with the addition of sugar, they form an agreeable sweetmeat. In some of the foreign pharmacopœias, there are the following preparations from this fruit, viz. (1) *Syrupus Berberum*, (2) *Rob Berberum*, and (3) *Rotulæ vel Trochisci Berberum*. The last are used to allay thirst.

BROMELIA Ananas. Hexandria Monogynia. Coronariæ. Asia and Africa. The Pine Apple. On account of the delicate quick poignancy of its juice, this fruit (to use the words of Dr. Milne), deserves the appellation it has universally obtained of *King of Fruits*. Yet we have known its poignant acid juice, howsoever grateful its taste and fragrant its odour, to disagree with many people. The strong acidity of this fruit is proved by a very frequent practice at Batavia (where the bromelia is almost as plentiful as turnips are with us) of cleansing swords and other instruments of steel or iron, when rusted, by running them through a pine apple. It is the cheapest acid they have. See Sir George Staunton's Embassy to China, Vol. i. 275, 4to. edition.

The fruits of some other species of this genus, such as the

BROMELIA Pinguin; and

———— *Karatas*, are likewise edible; but on account of their greater acidity, in much smaller quantities than the Pine Apple. Their sharp juice diluted with water, is used as a refrigerant in fevers in the West Indies.

BROSIMUM Alicastrum. Dicæcia Monandria. Jamaica. The Bread Nut. The boiled fruit of this tree has frequently been the support of the Negroes and poorer sort of the white people in times of scarcity. It is a wholesome and not unpleasant food. When roasted it eats something like Chestnuts. See *Browne's Natural History of Jamaica*.

CACTUS Opuntia. Icosandria Monogynia. Succulentæ. South America. Indian Fig or Prickly Pear. Not remarkable for its flavour, but wholesome and nutritious. In his observations on Minorca, *Cleghorn* relates that this fruit constitutes the principal sustenance of whole families in that island, during the month of September.

CITRUS Aurantium (*Aurantium*). Polyadelphia Icosandria. Pomaceæ. East Indies. The China Orange and Seville Orange. The subacid, mucilaginous juice of the first, or *China Orange*, (*Aurantium Sinense*) is exceedingly pleasant; cooling, and nutritious. It is powerfully antiscorbutic, and is very serviceable in fevers, especially in those that are of a bilious nature. The bitter essential oil which resides in the rind, is a fine aromatic. The

juice of the *Seville Orange* (*Aurantium Hispalense*) is rough, sour, and somewhat bitter; it is less palatable, but more stomachic, as well as more antiseptic, than the juice of the former. Hence, in bilious fevers, dysentery, &c. it is preferable to the other. The rind of this is also more aromatic than that of the china orange. The peel or rind of the Seville orange enters into the following preparations of the British pharmacopœias, viz. (1) *Aqua Citri Aurantii* Ph. Ed. (2) *Conserva Aurantii*, Ph. Lond. et Ed. (3) *Infusum Gentianæ compositum*, Ph. Lond. et Ed. (4) *Spiritus Raphani compositus*, Ph. Lond. (5) *Syrupus Aurantii corticis*, Ph. Lond. et Ed. (6) *Tinctura Aurantii corticis*, Ph. Lond. (7) *Tinctura Cinchonæ composita*, Ph. Lond. (8) *Tinctura Gentianæ composita*, Ph. Lond. et Ed. And the juice is one of the ingredients in the (9) *Succus Cochleariæ compositus*, Ph. Lond. et Ed. In the foreign dispensaries, an essential oil and a spirit are distilled from the peel.

CITRUS medica. Class and order, as in the preceding. Asia. (Limon). The Lemon. The juice of this fruit contains a peculiar acid, called citric acid (*Scheele*). The juice is best concentrated by congelation; but it must previously stand at rest for some time, to allow the mucilaginous parts to settle at the bottom. Lemon-juice, diluted with water and sweetened with sugar (*Lemonade*) (1) is employed to allay thirst and prevent putrescency in typhus and other fevers; as well as in scurvy (see Antiseptics) and dysentery. It is moreover like all other acids an Antidote against Vegetable Narcotic Poisons, and especially opium. It is also ser-

viceable in cases in which noxious fungi have been eaten. It is a good corrector and agreeable sauce for many kinds of animal food, and especially fish. In our pharmacopœias, we have the (1) *Syrupus Citri Medicæ*, and (2) *Succus Limonis spissatus*. The peel or rind is one of the ingredients in the (3) *Infusum Gentianæ compositum*, Ph. Lond. et Ed. and the distilled oil or *Essence* enters into the composition of the (4) *Spiritus Ammoniac compositus*, Ph. Lond. and *Alkohol Ammoniatum Aromaticum*, Ph. Ed.

CUCURBITA *Citrullus*. Monœcia Syngenesia. Cucurbitaceæ. Southern parts of Europe. Water Melon. A well known juicy, cooling fruit; but if eaten too freely, and especially when the body is heated, it disorders the bowels, occasioning colic and diarrhœa.

CUCUMIS *sativus*. Monœcia Syngenesia. Cucurbitaceæ. (Cucumis). The Cucumber. This is a watery, mucilaginous fruit. In its crude state, it is cold upon the stomach, and difficultly soluble; and on these accounts, when it is eaten raw, it proves exceedingly hurtful to many constitutions. When stewed, it affords a light and wholesome nourishment.—The expressed juice is recommended by some foreign writers in cases of phthisis pulmonalis.

CUCUMIS *Melo*. Class and order as above. The Melon. Of this fruit there are many varieties, differing from each other in the firmness and sapidity of their fleshy part. They all abound in a watery, saccharine juice; and accordingly are cooling and

laxative. If eaten too freely, they are apt to excite colic and diarrhœa.

Ficus Carica. Polygamia Triœcia. Scabridæ. Asia. (Carica). The Fig. The fresh ripe fruit is filled with a sweet mucilaginous juice, which is considerably nutritious. The flavour, however, is not very pleasant; and when swallowed too freely, it disorders the stomach and bowels. The dried fruit is more palatable, as well as more nutritive. It is an ingredient in the *Electuarium Sennæ*, Ph. Lond. et Ed. and in the *Decoctum Hordei compositum*, Ph. Lond.

FRAGARIA vesca. Icosandria. Polygynia. Senticosæ. The Strawberry. A pleasant, cooling, wholesome fruit. Strawberries are much recommended in phthisical, calculous, and gouty cases. *Sir William Temple*, who was a great sufferer from the gout, mentions ripe strawberries in terms of high commendation. He even calls them a specific in this disorder: And it is related by *Linnæus* (in his dissertation entitled *Fraga Vesca* inserted in the 8th Vol. of the *Amœn. Acad.*) that he not only removed several fits of the gout, but at length entirely prevented their recurrence by the free use of this fruit.—The juice of this fruit yields both citric and malic acid.

GARCINIA Mangostana. Dodecandria Monogynia. Bicornes. East Indies. The Mangostan or Mangosteen. One of the finest-flavoured and most wholesome fruits in the whole vegetable kingdom. See *Phil. Trans.* Vol. 38.

MANGIFERA indica. Pentandria Monogynia. East Indies. Mango. A wholesome, agreeable fruit. The unripe mangoes are pickled, and sent over to Europe.

MESPILUS germanica. Icosandria Pentagynia. Pomaceæ. Southern parts of Europe. The Medlar. This fruit is rough and astringent. It is not edible till it begins to decay, in which state it seems to undergo somewhat of a vinous fermentation, and thereby acquires a rich and poignant flavour, highly agreeable to many palates. In this state it is a sufficiently wholesome fruit.

MORUS nigra. Monœcia Tetrandria. Scabridæ. Persia. The Mulberry. The berries of this tree have a pleasant subacid taste. (The acid contained in the juice of this fruit is chiefly the tartaric; but the saline substance obtained from the bark of the tree, yields a different acid). They are cooling and laxative; but if eaten too freely, are apt to occasion diarrhœa. In the foreign dispensatories there is a *Rob. Mororum*; and in the London pharmacopœia a *Syrupus Mori*.

MUSA paradisiaca. The Plantain Tree. Polygamia Monœcia. Scitamineæ. East Indies. The boiled and roasted unripe fruit of this valuable tree is much used as a substitute for bread in the West Indies and South America. It is very nutritious, and is thought to answer better than wheaten bread or Indian corn for the hard-labouring Negroes. The ripe plantains contain a soft pulp, the flavour of which is exceedingly agreeable.

MUSA sapientum. Class and order as above. The Banana. This fruit is palatable and nutritious like that of the preceding species. The dried pulp of this fruit is often used in the West Indies for preparing a refreshing beverage, which is made by steeping it in water.

PHÆNIX dactylifera. Palmæ. Egypt, Syria, Persia. (Dactyli). Dates. This fruit abounds in a sweet mucilaginous juice, and is very nutritive.

For a long tract of country on the coast of Arabia, the common people live entirely upon dates and salted fish. A vinous liquor and ardent spirit are prepared from the fruit steeped in water and fermented. In their medicinal properties, dates coincide with figs and raisins, being reckoned, like them, demulcent and pectoral. They enter into some of the officinal preparations of the foreign pharmacopœias; but have no place in ours. They may well be dispensed with, figs being preferable for every pharmaceutical purpose.

PRUNUS Armeniaca. Icosandria Monogynia. Pomaceæ. Asia. (Malum Armeniacum). The Apricot. When thoroughly ripe, a sweet, nutritious, and wholesome fruit.

PRUNUS domestica. Class and Order as above. The Plum. Of this fruit there are numerous varieties. They rank among the fructus acido dulces. (the acid contained in the juice is the malic). When perfectly mature, they are pleasant and somewhat nutritive; but they readily ferment on the stomach,

and when eaten too freely, are apt to occasion flatulence, tormina, and diarrhœa. Swallowing the stones has in many instances produced fatal consequences. The dried fruit of the variety called *Brignola*, *Pruneola* vel *Prunella* (French Prunes) is a gentle laxative; and is an ingredient in the *Electuarium Sennæ* of our pharmacopœias.

PRUNUS *Cerasus*. Class and Order as above. (*Cerasus*). The Cherry. The subacid juice (the juice contains both citric and malic acid) of all the different varieties of this fruit, is very palatable and somewhat nutritive; but the fleshy or pulpy part, and especially the skins, are heavy and indigestible. Those cherries are the most wholesome, which have the softest and least fleshy pulp. In general, it may be remarked of this fruit, that it should be eaten sparingly. People, and especially young people, should be cautious not to swallow the stones, concerning which it is a mistaken notion among many, that they promote the digestion of the pulp. Dangerous, and even fatal obstructions of the bowels have frequently been the consequence of this mistake. The *Aqua Cerasorum* in the foreign pharmacopœias, is a trifling preparation; and the *Syrupus Cerasorum* and *Rob Cerasorum* of those dispensatories, have no advantage whatever over any of the other acidulous syrups and inspissated juices.

PUNICA *Granatum*. Icosandria Monogynia. Pomaceæ. Southern parts of Europe. (*Malum seu Pomum Granatum*). The Pomegranate. The red succulent pulp within this fruit is cooling, and of a pleasant acidity; but when eaten freely, it is

apt to disorder the bowels. Of the medicinal properties of the other parts of the pomegranate, notice will be taken hereafter, under ASTRINGENTS.

PYRUS communis. Icosandria Pentagynia. Pomaceæ. (*Pyrus hortensis*). The Pear. Of this fruit there are upwards of one hundred varieties. Pears are, for the most part, a wholesome, refreshing fruit; yet they prove cold, and sometimes occasion flatulency in those who have weak stomachs. The baked is by far more salutary than the raw fruit. The expressed juice, subjected to fermentation, yields the vinous liquor called *Perry* (*Pyraceum*) which, when kept to a proper age, and of a good quality, is a very wholesome beverage. In many cases of typhus-fever it answers better than wine.

PYRUS Cydonia. Class and order as in the preceding. (*Cydonium malum*). The Quince. This fruit is not eatable in its crude state. An elegant sweetmeat, called *Marmalade* (*Miva cydoniorum*) is prepared from it, by baking it with a proper quantity of sugar.

PYRUS Malus. Class and order as above. (*Pomum seu Malum hortense*). The Apple. Of this fruit there are upwards of seventy varieties. Both the sour and the sweet are very palatable and sufficiently salutary. (The juice of apples contains a peculiar acid, called malic acid). In the crude state, this fruit sometimes produces flatulency, which inconvenience is prevented by having it baked or boiled. It is then more wholesome and more nutritive. The vinous liquor, called *Cyder* (*Po-*

maceum) is prepared from the expressed juice of this fruit, and coincides in its dietetical properties with perry, except that it is generally more disposed to acidity. Where presses lined with lead are employed for squeezing out the apple juice, by cyder-makers, a portion of the metal is dissolved, and to this circumstance the frequent occurrence of colic in the cyder-countries, where such presses are used, is owing.

RIBES *Grossularia*. Pentandria Monogynia. Pomaceæ. (*Grossularia*). The Gooseberry. A cooling, palatable fruit. Eaten too freely, it gripes and purges.

RIBES *nigrum*. Class and Order as above. The Black Currant. A pleasant, cooling, subacid fruit. The skin or husk should always be rejected, as it is very indigestible. In the London pharmacopœia, there is the *Succus ribis nigri spissatus*, and the *Syrupus ribis nigri*.

RIBES *rubrum*. Class and Order as above. The Red Currant. Similar in most respects to the preceding.—The acid contained in the juice of both currants and gooseberries is partly the citric and partly the malic acid.

Rosa *canina*. Icosandria Polygynia. Senticosæ. Indigenous. (*Cynosbatum*). The Hip. This fruit is used chiefly as a sweetmeat. In our pharmacopœias, the only preparation from it is the *Conserva Cynosbati*.

RUBUS idæus. Class and Order the same as of the last. The Raspberry. A pleasant, cooling, wholesome fruit. It is much infested with grubs, the larvæ of different insects, which should be carefully picked out, as they are apt to produce mischief when swallowed. The *Syrupus rubi idæi* of the Lond. Ph. is an elegant preparation.—The juice of the raspberry contains both citric and malic acid.

VACCINIUM Myrtillus. Octandria Monogynia. Bicornes. Indigenous. Bilberry. Whortleberry.

VACCINIUM Oxycoccos. Class and Order as above. (Oxycoccos). The Cranberry.

VACCINIUM Vitis-idæa. Class and Order as above. (Vitis-idæa). Red Whortleberries.

The berries of all these species of vaccinium have a pleasant acidity, (the acid which they contain is the citric) accompanied with some degree of astringency. Cranberries baked with a proper quantity of sugar, make an agreeable sweetmeat. It is said that the berries of the vaccinium myrtillus are much employed in Germany and other parts of the Continent, for giving a colour and roughness to the new white wines, which are thereby (with the help of a little alum) made to pass for genuine red wines.

VITIS vinifera. Pentandria Monogynia. Hedera-
raceæ. The Vine-tree. Its fruit termed the Grape. In the ripe state, this palatable, wholesome, nutri-

tious fruit, is cooling and antiseptic; when eaten freely, it proves diuretic and gently laxative. The skins or husks, and the seeds or stones, are indigestible, and should always be rejected. The fresh fruit is very serviceable in dysentery (*Zimmerman* on the Dysentery) and according to *Moore* (View of Society and Manners in Italy, Vol. II. Letter 62) in pulmonary consumption. In bilious and putrid fevers, fresh ripe grapes are much to be recommended. (The acid contained in the juice of the grape is the tartaric). *Raisins* (*Uvæ passæ*. *Passulæ solis*. *Passulæ majores*) and *Currants* (*Passulæ minores*, the fruit of the *Vitis Apyrena*) are ripe grapes dried in the sun. They are nutritious and demulcent; and when eaten in considerable quantity, they prove laxative. They are esteemed pectoral and stomachic, &c. Grapes contain a large proportion of saccharine matter, to which their nutritive and laxative properties are chiefly to be attributed. They enter into the *Decoctum Hordei compositum*, Ph. Lond. the *Tinctura Cardamomi composita*, Ph. Lond. and *Tinctura Sennæ*, Ph. Lond. et Eblan.

It is well known that all the different kinds of *Wine* (*Vinum*) properly so called, are prepared from the fermented juice of this fruit. *Must* (*Mustum*) is the expressed, unfermented juice. *Vinegar* (*Acetum*) is the juice converted into an acid, by passing from the vinous into the acetous fermentation. *Spirit of Wine* (*Spiritus vinosus*) is alcohol or ardent spirit obtained from wine and other fermented liquors, by distillation; of which further notice will be taken when we come to treat of DRINKS.

D. SEMINA. *Seeds.*

AMYGDALUS communis. Icosandria Monogynia. Pomaceæ. Africa. The Almond. Sweet almonds are pleasantly flavoured and nutritious. They are so rich in oil, that it constitutes nearly half their weight. On this account they prove heavy, and not very digestible, when eaten in considerable quantity, especially if they have not been well preserved, and the oil has become rancid; but when taken in moderate quantity, and duly broken down by mastication, they are sufficiently wholesome. The skin or husk which envelops the kernel, should always be carefully peeled off, as it contains an acrid matter, which is exceedingly irritating, and has been known to produce much disorder of the stomach and bowels, with œdematous swelling of the face, &c. See *Winterbottom* on the Urticaria in the 5th Vol. of Med. Facts and Observations. Sweet almonds are used in a great variety of confectionary, and sometimes in soups. The officinal preparations from them in our pharmacopœias, are the *lac* and *oleum amygdalæ*. See DEMULCENTS.

ANACARDIUM occidentale. Polygamia Monœcia. Holoraceæ. East and West Indies. The Cashew-nut. The kernels contained within the kidney-shaped nuts of this tree, are sweet and palatable, and agree in their alimentary properties with almonds and the rest of the *nuces oleosæ*.

AVENA sativa. Triandria Digynia. Gramina. Oats. In the northern parts of Europe, this grain

is the principal sustenance of the inhabitants. The meal is made into thin, flat cakes (*panis avenaceus*) which are baked or roasted. These *oat-cakes* have a bitter dry taste, which at first is disagreeable, but which by time and usage, becomes pleasant and grateful. *Groats*, or oats, freed from the husks (*avena excorticata*) are much used in making broths, puddings, &c. They are wholesome, and gently laxative. *Gruel* (*Decoctum avenæ*) is prepared by boiling either the meal or groats, for a proper length of time, in water. It is moderately nutritive, demulcent, and aperient. See DEMULCENTS. *Souans*. Prepared by letting the husks of oats or oatmeal and water stand together for some days till the liquor becomes sour. The whole is afterwards strained, and the strained liquor is allowed to settle. The water is then poured gently off from the sediment, to which some fresh water is added and boiled with it, so as to form a jelly. *Pringle* and *Blane* relate, that in several instances the scurvy has been prevented and cured by this preparation alone.

Cocos nucifera. Palmæ. East Indies, and cultivated in the West Indies. The Cocoa Nut-tree. The milky liquor contained in the hollow of this fruit is cooling and agreeable. The kernel is not easily digested in the raw state; but softened by different modes of cooking, it affords a palatable and wholesome nourishment. A vinous liquor and ardent spirit are obtained from the sap of this tree.

CORYLUS Avellana. Monœcia Polyandria. Amygdaceæ. (Nux Avellana) The Hazel Nut and Fil-

bert. The Filbert. Like the almond, the kernels of this nut abound in oil. When fresh, and well masticated, they are not, in moderate quantity, unwholesome; but if they are swallowed without being sufficiently chewed, and in large quantities, they oppress the stomach, and bring on obstructions of the bowels. The skin should always be carefully peeled off before they are eaten, it being acrimonious, like the peel of the almond.

FAGUS Castanea. Class and order as in the preceding. (*Castanea*). The Chestnut. Less oily and more farinaceous than the preceding nuts. The raw fruit is not readily dissolved in the stomach; but when properly softened by roasting, it is rendered sufficiently light and nutritive. In both states the fruit is somewhat astringent.

HORDEUM vulgare. H. DISTICHON. Triandria Digynia. Gramina. Barley. To the inhabitants of the Alps, and some of the northern parts of Europe, this grain is the principal article of sustenance, as it was in ancient times of the Spartans. (1) *Barley-bread* (pan is hordeaceus) has a sweetish, not unpleasant taste, but is viscid and not readily digested.

(2) *Pearl Barley* (*hordeum perlatum*, *hordeum excorticatum*) is used in broths. It has been customary to employ the white or decorticated seeds only for making broths; but according to the late valuable experiments of Count *Rumford* (*Essays on Feeding the Poor*, 1796) the entire or rough seeds

of the common barley may be used for this purpose with equal, if not greater, advantage. It is only necessary to continue the boiling longer. Such a decoction is highly nutritious. The *decoction of pearl barley* (decoctum hordei, aqua hordeata) is a common drink in febrile disorders. Various additions may be made to it, such as lemon-juice, cream of tartar, wine, raisins, milk, &c. according as circumstances may require.

(3) *Barley Sugar* (saccharum hordeatum) is prepared by dissolving sugar in barley-water, and evaporating the solution to the point of crystallization. It is given in coughs and hoarsenesses, especially to children.

(4) *Malt* (Maltum vel Malta) is barley made to germinate, and afterwards dried. *Wort* (infusum malti) is recommended by *Macbride* as an antiscorbutic, and has been found serviceable by other practitioners in various cases, as shall be noticed hereafter. See ANTISEPTICS.

(5) Various kinds of *Beer* and *Ale* (cerevisia); of which an account will be found under the section of POTULENTA or Drinks.

Holcus Sorghum. Polygamia Monœcia. Gramina. Asia, and cultivated in Africa and the West Indies. *Guinea Corn*. The common food of the Negro slaves in the West Indies. They call it *Guiarnot* and make it into pap, puddings and bread. It is very nourishing, but not very readily dissolved in the stomach, and is somewhat consti-

pating. Hence it is only suited to those who lead a laborious and active life. The seeds of several other species of *holcus* are in like manner nutritive.

JUGLANS regia. Monœcia Polyandria. Amnataceæ. The Walnut. (*Aux juglans*). The kernel of the ripe fruit is highly palatable and nutritive. It should be well peeled before it is eaten, as the skin which invests it is bitter, acrid, and astringent. The green, unripe fruit, steeped in vinegar, is one of our most sapid and least unwholesome pickles.

ORYZA sativa. Hexandria Digynia. Gramina. Rice. This grain is the common sustenance of many nations of the East. It contains a light and very soluble mucilage and starch, and does not become acescent so readily as some other kinds of grain. It agrees best with the people of this climate, when eaten with gravy, and moderately seasoned with salt and spice. It is commonly supposed to possess a drying and astringent quality, and hence it is recommended in diarrhœa and dysentery. It has, however, no real astringency, and its effects, as such, in the cases just mentioned, are entirely owing to the light and not readily fermentable mucilage which it contains. It may be used, like pearl barley or groats, in broths and decoctions; but its greatest consumption is in puddings and stews. It appears from the experiments of the Board of Agriculture, that it may be very advantageously mixed with wheat flour for the composition of bread. The proportions for this purpose, should be three parts wheat flour and one part rice meal.

The weakness of sight and blindness to which the Chinese are remarkably liable, have been ascribed by most travellers to the frequent use of *hot* rice; but we are at a loss to conceive in what respects boiled can differ from unboiled rice, except in temperature and softness, two circumstances which tend to render it more digestible. The true source of disordered vision, so common among that luxurious people, is to be sought for in the abuse of venery, joined to the abuse of tea, spices and other narcotic and aromatic substances.

PANICUM <i>Italicum</i> .	} Triandria Digynia.
———— <i>Miliaceum</i> .	
	} Gramina. East Indies.

Millet. (*Milium*). The decorticated seeds of both these species of panicum, and the meal or flour prepared from them, are much used as articles of food in Italy, France, and Spain; and also in some parts of Germany. In those countries, they boil the millet-flour with water or milk, so as to form a thick pottage, which is very nourishing, and by no means unpalatable. It is also made into puddings and cakes, which are eaten with butter, and sometimes with wine. In some parts of Italy, and particularly in Lombardy, it is made into bread, which, however, soon becomes dry and stale, and is digested with difficulty.

PHASEOLUS *vulgaris*. Diadelphia Decandria. Leguminosæ, East Indies. The Kidney-bean. The fruit of this leguminous plant is eaten in two different states, viz. the pods (with the seeds) while they are yet tender and green, and the seeds after

they are perfectly ripe. In both cases they are prepared for the table by boiling. The young green pods are palatable, little liable to create flatulency, but not very nourishing. On the other hand, the ripe seeds are considerably nutritive, agreeing, in this respect, with ripe pease, but like them, somewhat flatulent.

PISTACIA vera. Diœcia Pentandria. Amentaceæ. Persia. The Pistacia-nut. Agrees with the almond in its alimentary properties, but it is softer and considerably more digestible. It is much eaten in Persia.

PISUM sativum. Diadelphia Decandria. Leguminosæ. Southern parts of Europe. The Pea. Green, tender, and fresh pease, are a wholesome and light food. When full grown and dried, they afford a strong nutriment. When triturated with water, they yield an emulsion. In many places the meal obtained from them is made into bread, which, however, without a large admixture of wheat-flour, is hard, heavy, and unpalatable. By steeping the pease-meal in water, the harsh flavour (as the Board of Agriculture has shown) is taken off, so that when mixed with wheat-flour, the taste is hardly to be perceived. We are further told, from the same authority, that pease-meal, by being boiled, previous to being mixed with wheaten-flour, incorporates more easily with that article, and probably is much wholesomer than otherwise it would be. Yet, after all, pease are scarcely fit to be manufactured into bread, and should therefore never be

employed for this purpose when better materials can be had.

POLYGONUM *Fagopyrum*. Octandria Trigynia. Holoraceæ. Asia and Africa. Buckwheat. (*Fagopyrum*. *Frumentum saracenicum*). The seeds of this plant, though not so nutritious as wheat, rye, and some other grain, are nevertheless proper for the support of man. They are much used in Brittany, where they are made into cakes. The method employed for this purpose in France, is described in the Account of Experiments on the Composition of Bread, published by the Board of Agriculture. In many parts of the Continent, the country people use a decoction of this grain to stop diarrhœas and fluxes.

Buckwheat is much cultivated in China, where (as *Sir G. Staunton* relates in his Embassy to that country, Vol. II. p. 378, 4to edition) it is applied to the same uses as other grain, and that its flour is remarkably fine and white.

SECALE *cereale*. Triandria Digynia. Gramina. Rye. A very common bread corn among the inhabitants of the northern parts of Europe. It is less nutritive than wheat; but is a sufficiently supporting, and not unwholesome grain, except when it happens to be corrupted by the *ergot*, so called by the French, and by medical writers *secale corniculatum* vel *cornutum*, and *clavus secalinus*. (Spurred Rye or Horned Rye). Rye, thus vitiated, has been accused by several respectable observers, of producing a fatal spasmodic disorder (known to Noso-

logists by the name of Raphania) and inflammation and mortification of the bowels, and sphacelation of the extremities. (*Scrinc Med. Siles. Satyr: Salerne Memoires* présentés à l'Acad. des Sciences. *Tissot Epist. Medico Pract.* and in *Phil. Trans.* Vol. 55. Also *Bergius* apud *Murray*, Vol. 5). This accusation is strongly supported by the experiments of *Scrinc*, *Salerne*, and *Tessier* (*Maladies des grains.* Paris, 1783) who killed a number of poultry and some swine by feeding them with it. On the other hand, Messrs. *Model*, *Parmenier* (*Recreations physiques, economiques et chymiques.* Paris, 1774) and *Schleger* (*De clavis secalinis.* Cassell, 1772) assert, that they have given spurred rye to different brute subjects, without perceiving them to be disordered by it. Some of them even ventured to eat it themselves, which they did without experiencing any bad effects from it. They acknowledge, however, that in several of the animals, to whom it was given, it occasioned costiveness and distention of the belly, inconveniencies which have been observed to arise from its use among the country people in Sweden (*Whalin* in the *Swedish Transactions.*)

In whatever way these contradictory accounts may be reconciled, we cannot help thinking with Professor *Murray*, that the secale cornutum is very unwholesome; and that, when taken into the body in considerable quantity, and for much length of time, it is capable of producing deleterious effects; but, that when mixed with large proportions of sound grain, its action is so far weakened and blunted, that it is prevented from being hurtful in

a very sensible degree ; just as metallic salts and some other poisonous matters are either rendered inert or deprived of most of their virulence by commixture with mucilaginous fluids, or by large dilution with water. For more on this subject, see the Vol. of the Phil. Trans. before referred to. *Halleri* Disputationes ad Morb. Hist. Vol. 4. *Lin-næi* Amœnitat. Academ. Vol. 6, and lastly, *Taube's* History of the disease, called *Raphania*, published (in the German tongue) at Gottingen, in 1782.

Rye-bread. (*Panis secalinus*) is of a dark brown colour, and readily becomes acescent, on which account it disagrees with weak constitutions, lying heavy on the stomach, and being apt to produce a lax state of the bowels. The *bonpournickel*, or *pumpernickel* of the Germans, is made of rye-meal, without having the bran separated from it. It requires a strong stomach, being digested with difficulty, but is sufficiently nutritious. *Rye-pottage* (*Pulmentum vel jusculum secalinum*) is said to be a useful article of diet in consumptive cases. Like wheat and other grain, rye may be made to yield an ardent spirit by fermentation with water and subsequent distillation.

THEOBROMA *Cacao.* Polyadelphia Decandria. Columniferæ. South America. The Chocolate Nut. The oily kernel contained in the seeds of the chocolate nut is exceedingly nutritious. When ground to a powder, and mixed up with sugar and other ingredients into a paste, which is afterwards dried, it constitutes what goes under the name of *Chocolate.* See **POTULENTA** or Drinks.

TRITICUM *æstivum*, *hybernum*, *Spelta*. Triandria Digynia. Gramina. Perhaps the most nutritive, but certainly the most wholesome of all kinds of grain, and preferable to all for the manufacture of bread. Wheat flour (*farina tritici*) is resolvable into three distinct parts, viz. (1) *Starch* (*amylum*) (2) *a mucilaginous saccharine matter* (*principium dulce mucilaginosum*) and (3) *gluten*. The first two are of a vegetable nature, whilst the latter possesses the properties of animal substances, being susceptible of the putrefactive fermentation, and yielding volatile alkali. This glutinous principle in wheaten flour was first discovered by *Beccaria* in 1728, and described by him in the Commentaries of the Academy at Bologna. These three constituent parts of wheat flour may be obtained separate, by taking some dough and washing it repeatedly with water, till it ceases to render the water milky or turbid. What is left undissolved is the glutinous part; the other two ingredients are contained in the water employed in washing the dough. By leaving this water at rest, the starch settles at the bottom, while the sweet mucilaginous matter remains suspended alone, and is easily separated by evaporation. A pound of wheat flour, treated in this manner, generally yields about four ounces of gluten, eleven ounces two drams of starch, and six drams of saccharine mucilaginous matter.

Wheaten-bread. (*Panis triticeus*). The most perfect of all bread. It has long been a subject of controversy with physicians, whether bread be proper for infants. Numerous authorities might

be quoted both for and against its use in early life ; but we do not think it worth the practitioner's while to be at the trouble of referring to all that has been written on that point, concerning which it may suffice to say, that for the first six months after birth, bread is little suited to the digestive powers of an infant's stomach, and will therefore seldom fail, if much is given, to produce flatulence and costiveness, and lay the foundation for mesenteric obstructions and ricketty affections ; but, that after that period, a moderate use of it may be allowed, the quantity being increased as the young subject uses more bodily motion, and acquires strength. What is here said relates to children naturally stout and healthy, where the reverse is the case, bread ought to be withheld for the first eight or nine months. The proper substitute in place of it, is biscuit-powder in small quantities, or a well boiled decoction of groats.

In respect to adults, it may be remarked that the quantity of bread which they consume, should be proportioned to the age, sex, constitution, and mode of life. Thus, supposing the hardy day labourer to require 2lbs. per day, 1lb. should suffice for the man who lives at his ease ; and studious and sickly persons should not eat more than half a pound or a quarter of a pound in the same space of time. In England it is too much the custom to eat more bread than is necessary. This over proportion of bread in the daily diet, gives rise to costiveness and heaviness, especially in sedentary people. In all instances the proportion should be greater in winter than in summer, during which

last season the great variety of esculent vegetables may for the most part supply its place.

The digestibility and nutritive power of wheaten bread varies according as the flour from which it is made is finer or coarser, i. e. according as the whole of the bran, or a part only is separated from it; giving rise to the distinctions made by the ancients, into fine wheaten bread (*panis siligineus*) second wheaten bread (*panis similagineus sive similaceus*) coarse wheaten bread (*panis confusaneus*) and bran-bread (*panis furfuraceus*). That which is made of the finest flour (white bread) is the most nutritious, but is liable to produce costiveness. On the other hand, that which is made of coarser flour (brown bread), i. e. of flour which contains a greater or less proportion of bran, is less nourishing but more laxative, and accordingly better suited to some constitutions. But if the proportion of bran be very great, the bread so prepared will afford but little nourishment, will be difficult of digestion, will produce flatulency and acidity, and sometimes diarrhœa.

The lightness and wholesomeness of bread depend upon the quality of the flour employed, upon the proper fermentation of the flour while in the state of dough, and lastly upon the degree of heat to which the dough is subjected in the baking. A certain proportion of common salt mixed with the flour improves the quality of bread; but it is otherwise with alum, now so generally employed by the public bakers. Although this styptic ingredient may not prove injurious to adults in the doses in

which it is swallowed with bread; yet it cannot be doubted that the quantity is sufficient to disorder the bowels of children.

The difference between new bread and stale bread, in regard to salubrity, is by no means unworthy of notice. The latter is by far the lightest and most wholesome. It is certain that dyspepsia, headach, and other disorders are occasioned by the daily use of hot-rolls at breakfast, or of bread recently drawn from the oven at other meals. (*Linnæus de Pane Diætetico apud Amœn. Acad. Vol. 5*). In a dietetic point of view, it is proper to observe, that fermented bread and fermented farinacea in general, are lighter or more digestible than the same when unfermented; but Dr. *Cullen* has shewn, in opposition to *Boerhaave* and his followers, that the large and constant use of unfermented meal is by no means unsalutary.

Biscuit. (*Panis biscoctus*) *Sea-Biscuit.* (*Panis nauticus*) In nutritive power biscuit coincides with bread, but is less liable to produce acidity, and is more constipating.

Vermicelli, Macaroni, &c. are chiefly composed of the fine flour of wheat, and are consequently very nutritious.

Starch (*Amylum*) is considerably nutritious. The jelly or mucilage prepared by dissolving it in hot water is useful in diarrhœa, dysentery, hectic fever, &c. See DEMULCENTS.—Wheat, like other grain, may be made to yield an *ardent spirit*.

Vicia *Faba*. Diadelphia Decandria. Leguminosæ. Egypt. The broad Bean. The green immature seeds, when boiled, are a wholesome garden stuff; but like all pulse, rather flatulent. Concerning the meal from the ripe dried seeds, the same may be said of it that has been before said respecting the meal from pease. It is however more astringent than the latter.

Zea *Mays*. Monœcia Triandria. Gramina. West Indies. Maize. Indian Corn. This species of grain is the staple article of sustenance in North America, and some parts of the West Indies. It is very wholesome, and gently laxative. In those countries, and in the Southern parts of Europe, various preparations are made from the meal. It is cultivated in Italy, where it is made into cakes. The celebrated *polenta* of the Italians is prepared from maize.

By itself the meal of this corn does not rise well into bread; but when boiled to the consistency of paste, and mixed with wheat flour, it makes excellent loaves. See Account of Experiments by the Board of Agriculture on the Composition of Bread. Lond. 1795; and a pamphlet, entitled Some Information on Indian Corn. Lond. 1795.

Like all other grain, it may be made to yield a sort of *beer*, and *ardent spirit*.

The following substance coincides so much in its alimentary properties with the preceding articles,

that it readily presents itself to be noticed under the same head with them, though it is not strictly one of the cerealia.

Sago. This amylaceous substance is prepared from the pith of a species of Palm, the *Cycas Circinalis*, or *Cycas revoluta*. It coincides in alimentary properties with tapioca, salep, and Indian arrow-root, which see. To make it palatable, it is customary to add to it, when boiled or softened with hot water, some lemon-juice, sugar, and wine. It is a common article of diet for the sick and convalescent.—According to *Thunberg* the pith of the *Zamia caffra* is applicable to alimentary purposes like the pith of the Sago palm.

E. ALGÆ. *Lichens and Sea-Weeds.*

LICHEN islandicus. Iceland Liverwort, or Eryn-go-leaved Liverwort. (*Muscus islandicus*). This plant abounds in mucilage, and when deprived of its bitterness and laxative property, by maceration in hot water, and afterwards boiled with a fresh quantity of water mixed with milk or broth, or with milk alone, it yields a wholesome and nutritious pottage, very common among the Icelanders. For observations on its medicinal uses, see DEMULCENTS.

- Fucus esculentus.* Eatable Fucus.
- *saccharinus.* Sweet Fucus.
- *digitatus.* Fingered Fucus or Sea-girdle.
- *palmatus.* Handed Fucus.

These and some other species of fucus, as well as the *ULVA lactuca*, or Green Laver and *ULVA palmata* Dills or Dulse, are eaten in the Northern parts of this island and in Ireland, both raw and boiled. They are mucilaginous and slightly nutritive.

F. FUNGI. *Mushrooms.*

AGARICUS campestris. The common Mushroom. Savoury, stimulant, and somewhat nutritive; but not very readily digested. Besides this, there are several other esculent agarics; but as they are all of them a species of food more suited to gratify the palate than to afford wholesome nourishment to the body, we do not think it necessary to enumerate them here. The Russians are so fond of mushrooms, that *Mr. Coxe* relates that he seldom entered a cottage among that people without seeing great abundance of them.

LYCOPERDON Tuber. (*Tuber citarium* of Bulliard). Truffle. Accords with the mushroom in its general properties. It is reputed to possess aphrodisiac properties. The same be said of the

PHALLUS esculentus. The Morell.

3. CONDIMENTA. *Condiments.*

Condiments are substances added in small quantities to our food, for the purpose of rendering it more savoury and stimulating. They are much used in the tropical climates, where the digestive organs become

enfeebled by the high degree of temperature to which the body is exposed. When used sparingly they promote the secretion of the gastric juice, and consequently prove a help to digestion, often wanted by persons advanced in years, and by those who lead a studious and sedentary life; but when taken too freely they produce a contrary effect, and lay the foundation for incurable diseases of the stomach, liver and intestines, terminating in dropsy or palsy.

All the variety of Condiments may be classed under the following heads :

A. CONDIMENTA SALSA. *Saline Condiments.* B. CONDIMENTA AROMATICA. *Aromatic Condiments.* C. CONDIMENTA OLEOSA. *Oily Condiments.* D. CONDIMENTA DULCIA. *Sweet Condiments.* E. CONDIMENTA ACIDA. *Sour Condiments.*

A. To the *Saline Condiments* belongs Common Salt. Culinary Salt. Sea-Salt. Muriate of Soda. (Sal Commune. Sal Culinare. Sal Marinum. Murias Sodæ). This is the most universal of all condiments. By its stimulant action upon the fauces, œsophagus and internal surface of the stomach, culinary salt promotes the secretion of the saliva and gastric juice, and thereby facilitates digestion. It is in this way, and not as Sir John Pringle has represented, by its septic or solvent action upon the food itself, that we account for its use as a condiment or help to digestion. The quantity of salt consumed by each person every year in bread alone

is very considerable, amounting to several pounds in weight;* besides what is used with other vegetable food and meat. In small quantities it is salutary not only to man, but to many of the brute creation. Among other advantages derived from the use of salt with our food may be mentioned that it checks the breeding of worms in the intestines. It is only when it is taken to excess that it proves injurious to the human body, depraving the blood, and producing scurvy. From what has been said, it is easy to see that the free and frequent use of salted meat and salted fish cannot be wholesome. It should be added that salt is improper in catarrhal and other inflammatory disorders, and in all other morbid conditions connected with increased sensibility. In such cases gruel and broths should be given unsalted.

B. Of the *Aromatic Condiments* some have been already noticed under the section which treated of Herbs. Such are the

ALLIUM *sativum*. Garlick.
—— *Porrum*. Leek.
—— *Ascalonicum*. Shallot.
—— *Cepa*. Onion.

COCHLEARIA *Armoracia*. (Raphanus rusticanus).
Horseradish. See STIMULANTS.

SINAPIS *nigra*. Common Mustard. See STIMULANTS.

* The quantity of salt used in bread-making is about an ounce in every quartern loaf.

SALVIA officinalis. Sage. See STIMULANTS.

THYMUS vulgaris. Didynamia Gymnospermia Verticillatæ. Southern parts of Europe. Thyme. These are all considerably stimulant, and, except the last two, diuretic. In small quantities, they give energy to the digestive organs, especially in phlegmatic and corpulent subjects; but if taken too freely, they excite heat and thirst.

PIPER nigrum. Diandria Trigynia. Piperitæ. East Indies. Black and white Pepper. This, as *Murray* has remarked, is the most common of all spices, not only in the East and West Indies, but in Europe, whither it is imported in such quantities as to constitute a great and staple article of commerce. In the hot climates, where the stomach requires to be powerfully stimulated, it is taken along with the food in large quantities; and instead of proving heating, has a cooling effect, by enabling the body to endure the debilitating action of the sun. But in temperate climates, and especially in this country, it is less necessary, and should therefore be used with a sparing hand. In small quantities, pepper is useful to gouty and paralytic persons. Where it has been abused, it has produced violent and sometimes fatal inflammations of the stomach, intestines, lungs, and liver; and it is at all times hurtful to the plethoric, and to those who are subject to the piles. See STIMULANTS.

PIPER longum. Class and Order as above. Long Pepper. Similar in its properties to the preceding. See STIMULANTS.

The same may be said of the dried berries of the *Myrtus Pimenta*. (Pimento). Icosandria Monogynia Hesperideæ. Jamaica Pepper or Allspice. *Piper Jamaicense*. See STIMULANTS.

CAPSICUM annuum. Pentandria Monogynia. Solanaceæ. South America, and cultivated in the West Indies. (*Piper Indicum*). Guinea Pepper.

CAPSICUM baccatum. Class and Order as in the preceding. Cayenne Pepper. The most stimulant of all spices. Too acrid and irritating for general use in European countries; but, in small quantities, serviceable in some cases of languor and irritability, and especially in gouty and paralytic affections. See STIMULANTS.

LAURUS Cinnamomum. Enneandria Monogynia. Holoraceæ. Ceylon. (*Cinnamomum*). Cinnamon. The true cinnamon is one of the most palatable and wholesome spices, very useful in debilities of the stomach and bowels, in diarrhœa, &c. But the bark of the *Laurus cassia*, which is much inferior in aromatic properties, is too frequently passed off for the genuine cinnamon. See STIMULANTS.

MYRISTICA Moschata. Monœcia Monandria Holoraceæ. Molacca Isles. (*Nux Moschata*). Nutmeg. A strong, pungent aromatic, of an agreeable flavour, but the least wholesome of all the spices. The acrid essential oil which it contains, is of a narcotic nature, and has been known to affect the head very powerfully in some instances, producing vertigo,

stupor, and delirium. (*Murray* Appar. Med. Vol. VI. 145). Hence its use is improper in apoplectic and paralytic cases. See *Cullen's* Mat. Med. *Mace* (Macis) which is the skin or tunic that immediately invests the nutmeg kernel, coincides in its properties with the kernel itself. See STIMULANTS.

EUGENIA caryophyllata. (Caryophyllus Aromaticus) Icosandria Monogynia. Hesperideæ. East Indies. Cloves. These may be reckoned among the finest and warmest aromatics. Their smell is peculiarly grateful. They are an useful stimulus to the stomach and system at large, in weaknesses of the primæ viæ, in gouty cases, &c. See STIMULANTS.

AMOMUM Zingiber. Monandria Monogynia. Scitamineæ. East and West Indies. (Zingiber). Ginger. A warm, and by no means unpleasant aromatic, preferable to most other spices, as possessing little acrimony, and consequently rarely known to irritate and inflame. It is an useful addition to flatulent vegetables, and some of the cold summer and autumnal fruits. See STIMULANTS.

C. Among the *Oily Condiments* may be mentioned.

Butter (butyrum), the moderate use of which along with boiled vegetables, and boiled or baked fruit, is by no means unwholesome. With some constitutions, however, melted butter disagrees remarkably.

OLEA Europæa. Diandria Monogynia. *Sepiariæ.* Palestine. (*Oleum Olivarum*). Olive Oil. Sallet Oil. When employed as a seasoning to raw or boiled vegetables, it prevents flatulence, and adds to their nutrimental power. Nevertheless, like butter, it does not agree with every stomach.

D. The *Sweet Condiments* are

Honey, (*Mel*) which some people use with their tea, in place of sugar, with which it corresponds in its general properties, as has been already mentioned at p. 52. And the crystallized juice of the

SACCHARUM officinarum or Sugar Cane. Triandria Digynia. Gramina. East and West Indies. The fresh juice of the Sugar-cane is considerably nutritious, antiseptic and laxative. The same properties belong to the crystallized juice, but in a weaker degree, especially in the instance of the purified crystals, or refined sugar; which last is much less nutritious than brown sugar. In moderate quantities, sugar is a wholesome condiment: It is particularly useful to persons who are troubled with calculous affections, and with those cutaneous eruptions which are unaccompanied with fever, and which are commonly termed scorbutic eruptions. Some have asserted that sugar is hurtful to the teeth; but many instances are recorded of persons who have indulged largely in the use of this luxury, without experiencing any inconvenience from it in that respect. Professor *Murray* relates that one of the Dukes of Beaufort was in the habit of consuming nearly a pound of sugar every day, for the

space of 40 years; yet it neither injured his teeth, nor produced the least disagreeable effect in any other way, and he lived to attain the age of 70. See other instances of this kind collected by the author last quoted; to which add the instance of *Hough*, bishop of Worcester, who lived to be upwards of 90, and who used to mix large quantities of sugar with his malt liquor. It may, however, be taken in such quantities as to prove extremely injurious. See *Stark's Experiments*.

The Sugar obtained from the *acer saccharinum*, the *beta cicla*, &c. coincides in nutrimental properties and dietetic uses, with the crystallized juice of the Sugar-cane. *Hoffman de Saccharo* 1701. *Astruc an Saccharum Alimentum?* 1759. *Murray de Dulcium Natura et Viribus* 1779, and reprinted in the 2d Vol. of his *Opuscula*. *Moseley on Sugar*, 1799. *Rum* (*Spiritus Sacchari*) is distilled from the fermented juice of the sugar-cane. See *POTULENTA*.

What has been said of Sugar may be applied to *Preserves* (*saccharo condita*).

E. Among the *Acid Condiments* the principal are

Lemon-juice (*Succus Citri Med.*) the general properties of which have been already noticed under the section which treats of Fruits. And

Vinegar (*Acetum*). In small quantities the acetic acid proves an agreeable and refreshing stimulus to some stomachs, especially during the sum-

mer-heats, and with particular kinds of food, such as veal, fish, and oysters. But it is hurtful to those who have weak stomachs and bowels, to calculous and gouty persons, to consumptive and chlorotic patients, to rickety subjects, and to young children.

What is said of vinegar, may be applied to *Pickles* (aceto condita) whose effects upon the organs of digestion are chiefly ascribable to the acetous acid which they have imbibed. Like that acid, a sparing use of them is allowable to persons in health; but is improper in the diseased conditions above enumerated.

4. POTULENTA. *Drinks.*

A. Potulentum Elementarium. Elementary Drink.

AQUA. Water. Either pure or mixed, water is the universal drink of the human race. Without a proper quantity of it, the solution of solid animal and vegetable food would be difficultly effected in the stomach, a due supply of fluid to the sanguiferous and lymphatic system would be withheld, the vessels would cease to be sufficiently full and distended, the process of nutrition would be incomplete, and all the secretions and excretions would be defective. Hence it is obvious, that water is absolutely necessary to the maintenance of health, and though not immediately, yet indirectly necessary to the support of life. Other useful purposes which water serves, are to dilute the fluids, to moisten and soften the solids, to moderate heat, and quench

thirst. Hence its use in fevers. Where custom or disease has not altered the human constitution, it is, as it comes from Nature's hands, the most salubrious of all drinks. Those, who, from their youth, have made it their constant and almost only beverage, have generally been distinguished for the soundest health, the most equal flow of spirits, the most retentive memory, the most perfect enjoyment of the senses of taste, hearing and vision, and the longest life. It is only where bad habits or accidental causes have impaired the body, that vinous or other stimulant additions to it become necessary; as in the case of gouty, paralytic and dropsical persons. *Hoffmann* de Aquæ Naturâ et Virtutibus, 1710, *Berger* de Potu Aquæ salubri et noxio, 1718.

The effects of water upon the human body when used as a drink, differ according to the difference in its temperature. Thus *Cold Water* is refrigerant, tonic and antiseptic, and is a proper and wholesome beverage during the warm months of the year, (*Hoffman* de Aquæ Frigidæ Salubritate) care being taken not to drink it while the body is overheated or perspiring freely from violent exercise; for in that case the sudden chill consequent to a copious draught of cold water has been known to produce very alarming and even fatal effects. See more on the use of cold water under REFRIGERANTS.

Warm Water (aqua tepida) is preferable to cold water, as a drink, for persons who are subject to dyspeptic and bilious complaints, and it may be taken more freely than cold water, and conse-

quently answers better as a diluent for carrying off bile and removing obstructions in cases of hepatic affection, and also for promoting the urinary secretion in cases of stone and gravel. When water of a temperature equal to that of the human body is used for drink, it proves considerably stimulant, and is particularly suited to dyspeptic, bilious, gouty and chlorotic subjects. See DILUENTS, where reference is made to *Dr. Saunders's Observations on the Aqueous Regimen*.

B. INFUSA ET DECOCTA VEGETABILIA. *Infusions and Decoctions of Vegetable Substances.*

(a) Infusum Theæ. Tea-Infusion. This is prepared from the dried leaves of the Tea-plant. (Thea. Polyandria Monogynia. Columniferæ. China and Japan). *Green Tea* and *Bohea Tea*, according to late observations are derived from the same plant; and it is affirmed that the different qualities of tea depend upon the following circumstances; (1) the difference of soil, (2) the age at which the leaves are gathered and (3) the management of them after they are gathered. It has been a popular notion that green tea owed its colour to its being dried on copper-plates; but all the tea in China is dried on earthen or iron plates; scarcely any utensil in that country being made of copper, the chief application of which is for coin. The colour and astringency of green tea is thought to be derived from the early period at which the leaves are plucked, and which like unripe fruit are generally green and acrid. (See Sir G. Staunton's Embassy to China, Vol. II. 4to Edition).

Although a moderate use of tea may not be attended with any bad consequences to the higher orders of society; yet it is certain that it is a very improper beverage for the labouring part of the community. The simple infusion of tea affords no nourishment whatever; it is only nutritious when sugar and milk are added to it. How much better, then, would it be for the poor, who are so much addicted to tea, if in its place they would drink an equal quantity of warm water, mixed with sugar and milk? What considerable sums might thus be saved for better purposes.

The Chinese, who drink largely of the simple infusion of tea, are much afflicted with rheumatism, palsy and blindness; and in this country the frequent occurrence of hysteria, amenorrhœa, and leucorrhœa in women, and of hypochondriasis in men, may be referred to the same cause.

It should be understood, that the preceding remarks apply to the general abuse of tea as an article of sustenance; for its occasional employment in a dietetical and medicinal way in some kinds of sickness, is often of use. Thus, the simple infusion, without sugar or milk, is a good and agreeable diluent in ardent fevers; and as it promotes perspiration and urine, it is frequently drunk with advantage in colds, catarrhs, rheumatism, head-ach, &c. It is also serviceable in cases of surfeit and indigestion. *Linnaeus de Potu Theæ*, 1765. *Lettsom on the Tea-tree*, 1772.

(b) *COFFEA arabica*. Pentandria Monogynia.

Stellatæ. Arabia. Cultivated in the West Indies. (Semina Coffeæ). Coffee. The infusion or decoction of the roasted seeds of the coffee-berry, when not too strong, is a wholesome, exhilarating, and strengthening beverage; and when mixed with a large proportion of milk, is a proper article of diet for literary and sedentary people. It is especially suited to persons advanced in years. People who are bilious and liable to costiveness should abstain from it. When drunk very strong, it proves stimulating and heating in a considerable degree, creating thirst and producing watchfulness. By an abusive indulgence in this drink, the organs of digestion are impaired, the appetite is destroyed, nutrition is impeded, and emaciation, general debility, paralytic affections, and nervous fever are brought on.

In a dietetical and medicinal way, coffee has been found useful in asthmatic affections (*Floyer, Musgrave, Pringle, Percival*) in intermittent fevers, diarrhoea, &c. It is employed with success to counteract the narcotic effects of opium. *Fischer de Potûs Coffee Usu et Abusu*, 1725. *Stahl de Effectibus Potus Coffeæ* 1740. *Linnaeus de Potu Coffeæ* 1761, and reprinted in *Amœn. Acad.* Vol. VI. *Percival's Med. and Exp. Essays*, Vol. II. *Moseley on Coffee*, 1785.

(c) THEOBROMA Cacao. (see p. 91). Nuclei Cacao. Chocolate. This is more nourishing and less stimulant than coffee. Besides sugar, vanilla and roucou are often mixed with the pulverized kernel of the chocolate nut before it is made into

cakes. Sometimes cinnamon, cloves, and other spices are mixed with it; but very improperly.

Chocolate made from cakes not adulterated with aromatics and other stimulant additaments, is a wholesome and highly nutritious beverage, and is frequently prescribed as a restorative in cases of emaciation, and to persons far advanced in years. It disagrees with bilious people.

Cocoa. This is a decoction of the broken shells of the chocolate nut. Some portions of the kernel remain adhering to the fragments of the shells, which communicate some degree of nutritious quality to the decoction, which besides is impregnated with the astringent properties of the shells. It is suited to persons who are troubled with a lax state of the bowels, or with leucorrhœa and other weakening discharges. *Stahl de Chocolata Indorum, 1736. Linnæus de Potu Chocolatæ, 1765, and in Amœn. Acad. Vol. VII.*

C. LIQUORES FERMENTATI. *Fermented Liquors.*

(a) Cerevisia. Malt Liquor. Beer and Ale. (*Cerevisia tenuis et fortis*). Well fermented malt liquors, whether from barley or other grain, provided they be not too strong, and be not taken in improper quantities, are wholesome, refreshing, and strengthening drinks. As these liquors are exceedingly nutritious, filling the vessels very rapidly, they are chiefly suited to persons who lead a busy and active life. With sedentary and bilious persons, they

do not agree so well; and they are improper for the corpulent and asthmatic, and those who are liable to giddiness or other complaints of the head. They are better when of a middle age, than when kept very long. Beer made from the infusion of *malted groats* (*cerevisia avenacea*) or *malted rye* (*cerevisia fecalina*) is lighter and more diuretic than the common *barley-beer* (*cerevisia hordeacea*). *Spruce beer* (*cerevisia pini*) is a powerful diuretic and antiscorbutic; it is, however, too cold for some constitutions. *Bottled-beer* (*cerevisia lagenaria*) is, on account of the carbonic acid gas which it contains, more refreshing than the barrelled. It is frequently prescribed as an antiseptic and restorative in low fevers and convalescencies; but care must be taken, during the use of it, that it do not operate too freely by stool. *London Porter* (*cerevisia nigra Londinensis*) with the common properties of malt liquor, possesses such stomachic and diuretic qualities, as give it a preference over common beer and ale in many cases. Being, however, strongly impregnated with bitters, of a narcotic kind, it is apt to induce drowsiness, and consequently it is improper wherever there is a tendency to cephalalgia, apoplexy, or other affections of the head. *Alberti de Cerevisiæ Potu*, 1732.

(b) Vinum. Wine. The effects of wine upon the human body differ according to the quantity that is taken, and according to the age and constitution of those who take it. In moderate quantities it proves an agreeable stimulus to adult persons, promoting digestion, giving tone and strength to the circulating system, and exhilaration to the

mind. Hence its use to dyspeptic persons, to those who are engaged in pursuits which occasion much anxiety and fatigue, and to those who suffer from grief or other distressing passions of the mind:

But if the sparing use of wine in such cases is productive of beneficial effects, the worst consequences follow when it is taken habitually in large quantities, or to excess. In that case it induces incurable diseases both on the body and the mind. The bodily diseases which it induces are indigestion; emaciation and general debility; gout and stone; obstructions of the liver and other viscera; apoplexy, palsy, dropsy, diabetes, &c. The mental diseases to which it gives rise, are loss of memory, impairment of the perceptive and reasoning faculties, depression of spirits, *tædium vitæ*, and insanity.

If the stimulus of wine, when taken freely and habitually is injurious to adults, it is still more so to very young persons; to whom and to children it should never be given but as a medicine.

In a dietetical view, wines are to be considered as they are acidulous or sweet, soft or austere. The acidulous wines, of which the *Rhenish* and *Hock* (*Vinum Rhenanum*) are the most noted, are the least heating and the most diuretic. The sweet wines, such as *Frontignac* (*Vinum Languedocium*) *Malaga* (V. *Malaccense*) *Tent* (V. *Tinto*) *Tohay* (V. *Tibicense*) and *Cape* (V. *Capense*) are more nutritious, but more heating than the acidulous wines, and accordingly should be taken in much smaller quantities. To the soft wines belong *Sherry*, (V.

Xeræ, *Madeira* (V. *Maderaicum*) *Claret* (V. *Burdigalense*) *Burgundy* (V. *Burgundicum*) *Champagne* (V. *Campanicum*). They are less stimulating than some of the sweet wines, and more cordial than the acidulous wines. Of the austere and astringent wines, that which is most used in this country, is the *Red Port* (V. *Portugalicum*) which, when it has not been mixed with too large a proportion of brandy, is a generous and stomachic wine, well suited to the generality of British constitutions. *Buchner de Vino, ut Medicina et Veneno, 1756.* Respecting the medicinal use of wine, see TONICS, STIMULANTS and ANTISEPTICS.

Perry and *Cyder* (*Vinum pomaceum et pyraceum*) hold a middle place between wine and malt liquor. They are less nutritious than the latter, and less cordial than the former.

(c) *Spiritus Vini. Spiritus Vinosus. Ardent Spirits.* Used medicinally in small quantities, and duly diluted, ardent spirits operate as a powerful stimulus in many cases of dyspepsia, flatulent colic and atonic gout. But as a common or frequent beverage, they produce a most pernicious effect, giving rise (but in a more violent degree) to the same diseases both of body and mind, which follow from an intemperate use of wine; insomuch that it has been truly said that more human beings have been destroyed by brandy and other spirituous liquors, than by pestilence or war. *Linnaeus de Spiritu Frumenti apud Amœn. Acad. Vol. vii. Trotter on Drunkenness, 1804.*—The most common spirituous liquor is that which is distilled from grain

(Spiritus Frumenti). As a stomachic it is much inferior to *Brandy* (Spiritus Vini). *Rum* (Spiritus Sacchari) which is distilled from the fermented juice of the sugar-cane, and *Gin* (Spiritus Juniperi) are more sudorific and diuretic. *Arrak* (Spiritus Oryzæ) is the least palatable, and perhaps the most unwholesome of all.

D. LIQUORES ANIMALIUM SECRETI QUI POTULENTORUM ADINSTAR SUMUNTUR. *Animal Secretions used as Drinks.*

(a) Lac Vaccinum. Cow's Milk.

(b) Lac Ebutyratum. Butter-Milk.

(c) Serum Lactis. Whey.

For remarks on the alimentary and dietetical uses of cow's milk and its preparations; see pages 18—24.

(d) Lac caprillum. Goat's Milk. See p. 15.

(e) Lac asininum. Asses Milk. See p. 26.

(f) Lac equinum. Mare's Milk. See p. 25.

E. INFUSA ET DECOCTA CARNIS QUADRUPEDUM, AVIUM ALIORUMQUE ANIMALIUM. *Infusions and Decoctions of Animal Substances used as Drinks.*

(a) Infusum carnis bubulæ. Beef Tea. See p. 17.

(b) Jus carnis bubulæ concentratum. Beef Gravy, or Soup. See p. 17.

(c) Jusculum vitulinum. Veal Broth. See p. 17.

(d) Jusculum vervecinum. Mutton Broth. See p. 16.

(e) Jusculum pullinum seu gallinaceum. Chicken Broth. See p. 34.

(f) Jus testudinis concentratum. Turtle Soup. See p. 40.

(g) Jus ranarum. Frog's Broth. See p. 41.

(h) Jus viperinum. Viper's Broth. See p. 41.

PART II.



MEDICINAL SUBSTANCES.

TABULAR VIEW

OF

The Contents of Class I. EVACUANTS.

A. ERRHINES. B. SIALAGOGUES. C. EXPECTORANTS.
D. EMETICS. E. CATHARTICS. F. DIURETICS.
G. DIAPHORETICS. H. EMMENAGOGUES.

A. ERRHINES.

(1) *From the Vegetable Kingdom.*

ASARUM *Europæum*. ASARABACCA.
¶ IRIS *Florentina*. FLORENTINE IRIS.
¶ LAVENDULA *Spica*. LAVENDER.
NICOTIANA *Tabacum*. TOBACCO.
¶ ORIGANUM *Majorana*. SWEET MARJORAM.
¶ ROSMARINUS *officinalis*. ROSEMARY.
TEUCRIUM *Marum*. HERB MASTICK.
VERATRUM *album*. WHITE HELLEBORE.

(2) *From the Mineral Kingdom.*

HYDRARGYRUS *vitriolatus*. SUBSULPHAS HYDR. *flavus*.
VITRIOLATED QUICKSILVER. YELLOW SUBSULPHATE OF
QUICKSILVER.

PART II.—CLASS I.

EVACUANTS. A. ERRHINES.

ERRHINES, called also Sternutatories, are acrid substances applied to the nostrils, for the purpose of stimulating the sensorium commune through the medium of the olfactory nerves, and of promoting the discharge of mucus from the nose. They are employed in various diseases of the head, eyes and teeth. *Hoffman de Pulverum Sternutatoriorum Usu et Abusu.*

(1) *From the Vegetable Kingdom.*

ASARUM Europæum. Dodecandria Monogynia. Sarmenlaceæ. Indigenous. (Folia). Asarabacca. In modern practice, and especially in this country, it is seldom used but for the purpose of increasing the discharge of mucus from the nose, which intention it answers very effectually, and is accordingly the principal ingredient in the sternutatory compositions of our own and foreign dispensatories; such as the *Pulvis Asari compositus* of the London, Edinburgh, Dublin, and Swedish pharmacopœias; and the *Pulvis Sternutatorius* of the Danish pharmacopœia. The leaves only are now prescribed as an errhine; but formerly the dried roots, as well as leaves, were employed as an emetic, cathartic, and diuretic, in doses of twenty or thirty grains.

Other preparations, such as infusions and decoctions, have also been made from the roots, in the proportion of one or two drachms to a pint of water, reduced by evaporation to half the quantity, and taken in doses of an ounce every second or third hour, in dropsies (*Allioni*). Certainly this plant possesses great activity, but at the same time a degree of virulence, which renders its use in any other way, except as a sternutatory, hardly advisable.

¶ *IRIS Florentina*. Triandria Monogynia. Ensatæ. Italy. (Radix). Florentine Iris, corruptedly Orris, or Orrice. The dried root of this plant enters into the composition of some of the foreign sternutatory powders; but as an errhine, it is much inferior to the asarum, marum syriacum, nicotiana, &c. and may therefore be dispensed with.

¶ *LAVENDULA Spica*. Didynamia Angiospermia. Verticillatæ. Suffrutex. France, Spain, Italy. (Flores, seu Spicæ florentes). Lavender. As an errhine, the dried flowers, or flowering spikes of this odoriferous plant, may well be dispensed with.

NICOTIANA Tabacum. Pentandria Monogynia. Solanaceæ. America. (Tabacum. Folia). Tobacco. The powder from the dried leaves of this plant, is the basis of all the different sorts of *Snuff*, and is consequently more in use than any other errhine. Where habit has not rendered the Schneiderian membrane insensible to its stimulus,

it excites sneezing, and promotes the discharge of mucus from the nostrils very powerfully. Hence, the occasional application of it is serviceable in cases of cephalalgia, ophthalmia, &c. but on account of its narcotic quality, it is not so proper as the *asa-rum*, in apoplexy, lethargy, deafness, and some other diseases of the head. In respect to its habitual use, it can have no good effect as a remedy, and as a matter of fashion, it is not only disgusting, but when carried to excess, is injurious to the health. *Stahl* de Tabaci effectibus salutaribus et nocivis, 1732. *Buchner* de genuinis Viribus Tabaci, 1746. *Triller* de Tabaci ptarmici abusu in Opuscul. Vol. I. For observations on the Smoking and Chewing of Tobacco, see SIALAGOGUES.

¶ *ORIGANUM Majorana*. Didynamia Gymnospermia. Verticillatæ. Grows wild in the Southern parts of Europe. (*Majorana*. Herba). Sweet Marjoram. As an *errhine*, superfluous.

¶ *ROSMARINUS officinalis*. Diandria Monogynia Verticillatæ. France, Spain, Italy. (*Cacumina vel summitates florentes*). Rosemary. The dried flowering tops of this shrub are a common addition to sternutatory powders; to which, however, they communicate more odour than activity.

TEUCRIUM Marum. Didynamia Gymnospermia. Verticillatæ. Spain, Greece, Crete. (*Marum Syriacum*. Herba). Herb Mastick. A powerful and useful *errhine*, less acrid than the *asa-rum*, and preferable in most cases to the *nicotiana*, as being free from all narcotic quality. It is an ingre-

dient in the *Pulvis Asari compositus* of our pharmacopœias.

VERATRUM album. Polygamia Monœcia. Liliaceæ. Switzerland, Italy, Austria, Siberia. (*Helleborus albus.* Radix). White Hellebore. A few grains of the dried root of this plant, snuffed up the nostrils, produce violent sneezing, and a copious discharge of mucus. Hence it has been recommended as a sternutatory in apoplexy, lethargy, and other disorders of the head; but as it possesses considerable virulence, it should not be employed, even in this way, without very great caution.

(2) *From the Mineral Kingdom.*

HYDRARGYRUS vitriolatus. L. Ph. *Subsulphas Hydrargyri flavus,* Ph. Ed. *Hydrargyrum subvitriolatum,* Ph. Eblan. (*Turpethum minerale*). Vitriolated Quicksilver. Yellow Subsulphate of Quicksilver. Sub-vitriolated Quicksilver. One grain of this mercurial salt, rubbed with a little powdered liquorice root, and snuffed up the nose, acts as a powerful sternutatory, and has been found serviceable in diseases of the head and eyes, in which last cases it has been lately much recommended by Mr. *Ware*. Its preparation and uses in other cases are mentioned under *SIALAGOGUES*.

B. *SIALAGOGUES.*

(1) *From the Vegetable Kingdom.*

AMOMUM Zingiber. GINGER.

ANTHEMIS *Pyrethrum.* PELLITORY OF SPAIN.

DAPHNE *Mezereum.* MEZEREON.

NICOTIANA *Tabacum.* TOBACCO.

PISTACIA *Lentiscus.* MASTICK.

(2) *From the Mineral Kingdom.*

HYDRARGYRUS, ejusque præparata. QUICKSILVER, and its preparations.

SIALAGOGUES, or medicines which excite a flow of saliva, are of two kinds; viz. those which act topically, and those which affect the system at large. Of the first kind are Masticatories, or certain resinous, aromatic and bitter substances which stimulate the salivary glands, and increase their secretory action, without being received into the circulation. They are useful in paralytic affections of the tongue, and in toothach. Of the second kind is quicksilver, which, being introduced into the stomach, or rubbed on the skin, is taken up by the absorbents; and through the medium of that set of vessels is brought to act upon the salivary glands. From the course which it takes, it acts upon the system at large, as well as upon those glands; and hence its efficacy in curing many diseases which resist the operation of other remedies.

(1) *From the Vegetable Kingdom.*

AMOMUM *Zingiber.* Monandria Monogynia:

Scitamineæ. East Indies, and by transplantation, West Indies. (*Zingiber. Radix*). Ginger. The dried root kept in the mouth some time, and well chewed, provokes a considerable flow of saliva; and hence has proved serviceable, when used in this way, in relaxations and strumous affections of the tonsils, in some disorders of the stomach, and in palsies of the tongue and muscles of the face. It has this advantage over many other masticatories, that no harm can arise if it should not be entirely thrown out with the spittle.

ANTHEMIS *Pyrethrum*. Syngenesia Polygamia superflua. Compositæ radiatæ. Southern parts of Europe, but a native of Barbary. (*Pyrethrum. Radix*). Pellitory of Spain. This root is a more powerful sialagogue than the preceding. It is suited to the same cases, and is moreover a common remedy against the tooth-ach. It may be used either in substance, or in the form of an infusion or decoction, which last must be made in a covered vessel, otherwise the active particles of the root will be carried off with the steam.

DAPHNE *Mezereum*. Octandria Monogynia. Vepreculæ. Indigenous. Frutex. (*Mezereum. Cortex Radicis*). Mezereon. The root of this shrub chewed in the mouth, cured a difficulty of swallowing, seemingly occasioned by a paralytic affection (*Withering*). According to *Pallas*, it is employed, in this way, in some parts of Russia, against the tooth-ach, care being taken not to swallow the spittle, which from its acrimony would inflame the throat. It seems to surpass the pyrethrum in siala-

gogue power. Of its other uses, mention will be made under STIMULANTS.

NICOTIANA Tabacum. (See p. 120) Tobacco. When chewed and held in the mouth, this narcotic herb excites a copious flow of saliva, and in this way is sometimes useful in cases of tooth-ach. As for the vulgar practice of chewing tobacco, it is not only disagreeable to beholders, but injurious to the parties themselves, both because it occasions a waste of saliva, and because a portion of the saliva impregnated with the narcotic principle of the tobacco descends into the stomach, and disturbs its functions; whence a loathing of food, dyspepsia, and emaciation follow. The same may be said of the smoking of tobacco.

PISTACIA Lentiscus. Dioecia Pentandria. Amnataceæ. Arbor. Portugal, Spain, Italy, Chio. (Mastix. Mastiche-Resina). Mastick. A lump of this resin chewed in the mouth, is a long-established remedy in paralytic affections of the tongue, and of the muscles concerned in deglutition, and also in the tooth-ach. It is chiefly indebted to its agreeable odour for the preference which it has generally received before some other articles of this section.

(2) *From the Mineral Kingdom.*

HYDRARGYRUS. (Argentum vivum. Mercurius). Quicksilver. Mercury. Spain, Tyrol, Hungary, East Indies, South America. This is the most useful of all metallic substances, not even excepting antimony itself, in the healing art. The place

of antimony as an emetic and sudorific, and of iron as an astringent and tonic, may be supplied by various articles from the vegetable kingdom; but no other substance from any of the three kingdoms of nature, is capable of supplying the place of quicksilver in certain cutaneous diseases, in cases of lymphatic and visceral obstructions, in hydrocephalus, in tetanus, and above all in the lues venerea. It is moreover a principal remedy in the yellow fever of America and the West Indies; and according to the testimonies of some practitioners, in the cynanche trachealis or croup. Its use in hydrophobia is questionable.

Over all other medicines, quicksilver possesses the peculiar advantage of operating on the living body as efficaciously in many instances, when applied externally, as when taken by the mouth. Hence, where the stomach and bowels cannot bear it in sufficient quantity, another channel by which it may be conveyed into the system, still remains open, we mean the pores of the skin; and in some cases, where the urgency of the symptoms requires it to be exhibited without loss of time, and in large quantities, both modes of introducing it may be employed at once.

Excepting the exhibition of it in ileus (see CATHARTICS) in its pure liquid state, this metallic substance is variously modified and combined by pharmaceutical and chemical treatment, in order to fit it for medicinal use. Thus altered, it is perhaps more extensively employed than any other article, unless it be opium, in the materia medica.

Quicksilver separated from its impurities by distillation with iron filings, is the *Hydrargyrus purificatus*, Ph. Lond. et Ed. The *Hydrargyrum purificatum*, Ph. Eblan. is quicksilver subjected to distillation without the iron filings or any other addition.

This purified quicksilver is further subjected to various mechanical and chemical processes for medicinal use; such as (1) *division of its particles by triture* (2) *combination with sulphur* (3) *combination with oxygen or oxydizement* (4) *combination with acids.*

(1) *By long continued triture* with saccharine, mucilaginous, oily or fatty, and earthy substances, not only are the particles of quicksilver minutely divided, but the globuli are at the same time slightly oxydized, by having their surfaces repeatedly brought into contact with the air. In this state of subtile division and imperfect oxydizement, quicksilver operates in a very efficacious, but mild manner upon the human body: Accordingly, the triturated preparations of this metal, are in very general use. Of these the principal are the

(a) *Pilulæ Hydrargyri*, Ph. Lond. Ed. et Eblan. Quicksilver Pills. Mercurial Pills. (*Pilulæ Mercuriales*). These Pills are prepared by triturating a given proportion of purified quicksilver with rose conserve and other substances, as afterwards specified, until the quicksilver globules cease to be discernible. In the instance of this preparation, and indeed of many others, it is to be regretted.

that the proportion of the metal to the substances employed in its trituration is different in all the three pharmacopœias, whence the doses vary in each. Thus in the *Pilulæ Hydrargyri*, Ph. Lon. the proportions are quicksilver 2 parts, rose- conserve 3 parts, liquorice powder 1 part. The quicksilver and conserve are first duly incorporated by trituration, and the liquorice powder is added to give the mass a proper consistency. Twelve grains of this mass contain 4 grains of quicksilver.—In the *Pilulæ Hydrargyri*, Ph. Ed. the proportions are quicksilver 1 part, rose- conserve 1 part, starch 2 parts. The quicksilver is to be triturated to extinction with the conserve, adding, if necessary, a little mucilage of gum arabic; the starch is then added, and the whole formed into a mass, to be immediately divided into 480 pills of an equal size. Each of these pills contains 1 grain of quicksilver.—The proportions in the *Pilulæ Hydrargyri*, Ph. Eblan. are quicksilver and extract of liquorice 3 parts, liquorice powder 1 and $\frac{1}{2}$ part. The liquorice extract being softened with warm water till it becomes of the consistence of honey, the quicksilver is duly triturated with it, and the liquorice powder is afterwards added, together with as much water as suffices to make the whole into a mass proper for being formed into pills. Sixteen grains of this preparation contain ten grains of quicksilver.

¶ (b) *Mistura Hydrargyri mucilaginosæ*. Mucilaginous Mixture of Quicksilver. Called also, improperly, *Solutio mercurialis gummosa*, there being no solution, but only a division and suspension of the metal. This preparation, which from the name

of its inventor is sometimes simply denominated *Solutio Plenckiana*, is made by triturating quicksilver with mucilage of gum arabic, till the globules disappear, and afterwards gradually diluting the mucilage with some distilled water, so as to bring it to the form of a mixture. It is employed both internally and externally, in venereal and other cases. Eight ounces of this mixture contain one dram of quicksilver, and the dose is an eighth part night and morning. It is also used as a gargle in venereal ulceration of the fauces, as a collyrium in venereal ophthalmies, and as an injection in gonorrhœa. But for all the purposes of a topical application, a solution of muriated quicksilver is preferable; and for internal exhibition, the quicksilver pills or calomel generally answer better. The practical objections to this medicine are, that, varying in its strength as it comes from the hands of different compounders, it is very uncertain in its operation; and the pharmaceutical objections are, that it requires too much time and trouble in its preparation; for, in order to divide the globules so minutely as to have them completely suspended, the trituration must be continued, not for fifteen minutes only, as *Plenck* has directed, but for the space of a whole hour; and even then, if the mixture is suffered to remain long without being shaken up, some of the metallic particles will separate and fall to the bottom. Upon the whole, therefore, notwithstanding the high encomiums bestowed upon it by its inventor (*Plenck Methodus nova argentum vivum exhibendi*, 1766, of which an English translation was published in 1767) the *mistura hydrargyri mucilaginosa* may

well be erased from the long list of mercurial preparations.

(c) *Unguentum Hydrargyri*, Ph. Lond. Ed. et Ebl. Quicksilver Ointment. (*Unguentum cæruleum*. Blue Ointment). Made by triturating quicksilver with hog's lard and mutton suet until the globules disappear. In the London and Dublin pharmacopœia there are two sorts of this ointment, viz. the *Unguentum Hydrargyri fortius* and the *Unguentum Hydrargyri mitius*. Of the first, or stronger ointment, two drachms contain one drachm of the metal; of the second; or weaker ointment, six drachms contain only one drachm. One drachm of the *Unguentum Hydrargyri* of the Edinburgh pharmacopœia, contains twelve grains of quicksilver.

Mercurial unction consists in rubbing a proper quantity (viz. 1 drachm of the stronger and 2 drachms of the weaker) of these ointments upon the inside of the thighs every night (or, as some think better, half the before mentioned quantity, night and morning) till the mouth becomes affected. The quicksilver particles applied in this manner to the pores of the skin, are sucked up by the absorbents, and carried into the circulation, where they produce the same general effects as they do when given by the mouth. This mode of applying mercury is frequently resorted to in venereal cases, in hydrocephalus, hydrophobia, tetanus, &c. A great advantage over the exhibition of quicksilver by the mouth attends the friction of this metal, under the form of an ointment, upon the skin, as by

the last method a large quantity of quicksilver can be introduced into the system without disturbing the stomach and bowels. Hence it is by far the most effectual way of using this remedy in the cases abovementioned.

In the *Emplastrum Ammoniaci cum Hydrargyro*, and *Emplastrum Lithargyri cum Hydrargyro*, Ph. Lond. the quicksilver is triturated with sulphurated oil, and afterwards mixed in the first formula with melted ammoniacum, and in the second with melted litharge plaster. The *Emplastrum Hydrargyri* (*Emplastrum cæruleum*) Ph. Ed. is made by triturating the quicksilver with oil and resin (previously melted together, and suffered to become cold) and afterwards mixing the whole gradually with melted plaster of semi-vitrified oxyd of lead (litharge plaster). These mercurial plasters are applied to glandular indurations and tumours, whether from the venereal virus, or from other causes; to the knee-joint in white swellings of that part; to the right hypochondrium in schirrosity of the liver, &c.

¶ (d) *Hydrargyrus cum Creta*, Ph. Lond. Quicksilver with Chalk. (*Hydrargyrus cum Creta tritu commixtus*). This is made by triturating till the globules disappear, three parts of quicksilver with five parts of chalk. Dose 15 or 20 grains. It is very uncertain in its operation, and is an unnecessary addition to the long list of mercurial preparations.

(2) *By combination with Quicksilver.*

¶ (a) *Hydrargyrus cum Sulphure* Ph. Lond. *Sulphuretum Hydrargyri nigrum* Ph. Ed. *Hydrargyrum Sulphuratum nigrum* Ph. Eblan. Quicksilver with Sulphur. Black Sulphuret of Quicksilver. Black Sulphurated Quicksilver. (*Æthiops mineralis*) In this preparation sulphur is triturated with an equal weight of quicksilver, until the globules of the latter are no longer visible. Dose from 10 to 30 grains. It is a very uncertain preparation, and in these days is seldom called for.

The *æthiops mineralis* (black sulphuret of quicksilver) of the Swedish pharmacopœia is prepared by melting sulphur in an iron pot, adding quicksilver to it, and keeping the whole in a state of liquefaction, stirring it all the while, until the two ingredients appear to be intimately united. After the mass is taken from the fire, and is become cold, it is ground to a powder in an iron mortar.

¶ (b) *Hydrargyrus sulphuratus ruber*, Ph. Lond. *Hydrargyrum Sulphuratum rubrum* Ph. Eblan. *Sulphuretum Hydrargyri rubrum*, Ph. Ed. Red Sulphuret of Quicksilver. Red Sulphurated Quicksilver. (*Cinnabaris factitia*). Prepared by mixing 5 parts of quicksilver with 1 part of sulphur (while the sulphur is in a state of fusion), and afterwards subjecting the compound to sublimation. By this process the quicksilver is more intimately combined with the sulphur, than it is in the preceding preparation. Red sulphuret of quicksilver was for-

merly prescribed in doses of from five to fifteen or twenty grains, as an alterative, in cutaneous diseases, gouty affections, &c. and not many years since it was cried up as a remedy against the hydrophobia. But to the last recommendation the enlightened practitioner gives no degree of credit; and as little faith has he in its external use as a fumigation in venereal ulcerations of the throat, the cure of which is not to be trusted to quicksilver so applied. It is in fact, like all the sulphurated compounds of quicksilver, a very uncertain preparation, and accordingly is now seldom prescribed. What is here said of the factitious, may be equally applied to the *native cinnabar*, which is still less fit for medicinal use, on account of other mineral substances with which it is accidentally mixed.

(3) The *oxidized and subsaline* * *preparations of quicksilver* for medicinal use are the following:

(a) *Hydrargyrum calcinatus*, Ph. Lond. *Hydrargyrum calcinatum* Ph. Eblan. Calcined quicksilver. (Oxydum Hydrargyri rubrum. Red Oxyd of quicksilver). It is obtained by subjecting quicksilver in a glass vessel admitting the air, to a heat of 600 degrees, until it is converted into a red powder. This preparation is sometimes prescribed internally. The usual dose is one grain every night, or night and morning, made into a pill. As it is apt

* The term *subsaline* I apply to those preparations which are neither pure oxyds nor perfect metallic salts, but oxyds with a small proportion of acid combined with them. They are not soluble in water.

to purge, a quarter or half a grain of opium is generally added to it.

Notwithstanding the partiality shown by some eminent practitioners, and particularly by the late Mr. *John Hunter*, to the hydrargyrus calcinatus in venereal cases, it is a preparation of too much activity for the generality of constitutions, and therefore is now almost out of use.

(b) *Hydrargyrus nitratus ruber* Ph. Lond. *Hydrargyrum Sub-nitratum* Ph. Eblan. *Oxidum Hydrargyri rubrum per acidum nitricum*. Ph. Ed. (Mercurius præcipitatus ruber) Red Nitrated Quicksilver. Subnitrated Quicksilver. Red Oxyd of Quicksilver by Nitric Acid. (Red Precipitate.) Prepared by dissolving quicksilver in nitrous acid in a gentle heat, then evaporating the solution, and subjecting the residuum to a strong heat, until it is converted into red shining squamulæ.

The degree of heat to which this preparation is subjected, is supposed to be sufficient for expelling all the nitrous acid, whence it is commonly looked upon as a mere oxyd of quicksilver. If this were the case, the appellation of nitrated quicksilver would be extremely improper. There is little doubt, however, that some of the acid remains combined with it, after it has undergone the action of the fire. Hence its activity is so much greater than that of the hydrargyrus calcinatus. It is never prescribed in any other way than as an external application; being much used by the Surgeons to cleanse and stimulate old ulcers, to destroy proud flesh, to induce suppurative inflammation in glandular, scrophulous

sores, and is occasionally added to ophthalmic ointments, in ulcerations of the eye-lids (psorophthalmia) and obfuscations of the cornea. The basis of the *Balsamum Ophthalmicum rubrum* of *St. Yves*, is nitrated quicksilver. The proportion, about one part to nine of butter, or ointment of hog's lard. It is a very strong application, and should be used in very minute quantities (only as much as equals a large pin's head, night and morning) and with great caution. Similar to this is the *Unguentum Oxidi Hydrargyri rubri*. Ph. Ed. in which the proportions are 1 part of this mercurial oxyd to 8 parts of hog's lard.

(c) *Oxidum Hydrargyri cinereum*, Ph. Ed. *Pulvis Hydrargyri cinereus*, Ph. Eblan. Grey oxyd of quicksilver. Grey Quicksilver Powder. Obtained by adding to a diluted solution of nitrated quicksilver, a sufficient quantity of water of prepared ammonia, (water of carbonate of ammonia) and afterwards washing and drying the precipitate. This preparation is an oxyd of quicksilver. It is given in venereal cases, in the quantity of two or three grains twice a day. Being less apt to disorder the stomach and bowels than most of the other mercurial preparations, it is in many instances preferable to them. It is the basis of the *Unguentum Oxidi Hydrargyri Cinerei*, Ph. Ed. which is composed of one part of this oxyd and 3 parts of hog's lard. It is applicable to the same purposes as the *Unguentum Hydrargyri*. *Hahneman's* mercurius solubilis (for precipitating which from the nitrous solution, water of pure ammonia is used) is a preparation si-

milar to this. *Amelung de Mercurio Solubili Hahnemanni*, 1792.

(d) *Calx Hydrargyri alba*, Ph. Lond. White Calx of Quicksilver (Submuriæ Hydrargyri ammoniatus). Prepared by dissolving muriated quicksilver in water impregnated with sal ammoniac, and afterwards adding to the solution a proper quantity of water of prepared kali (water of carbonate of potass.) The powder which falls to the bottom, on adding the water of prepared kali, is quicksilver deprived of the chief part of the muriatic acid with which it was before combined, and retaining a portion of ammonia. It is afterwards washed with water till it becomes tasteless. In this state it is to be considered as an ammoniated submuriate of quicksilver. It is only used as an external application. The *Unguentum Calcis Hydrargyri albæ* of the London pharmacopœia, consists of 1 drachm of this mercurial preparation, and 1 and $\frac{1}{2}$ ounce of ointment of hog's lard. A small portion of this ointment, rubbed between the fingers and upon the wrists, every night till the pimples go off, is an effectual cure for the itch.

¶ (e) *Hydrargyrus vitriolatus*, Ph. Lond. *Sub Sulphas Hydrargyri flavus*, Ph. Ed. *Hydrargyrum Sub-Vitriolatum*, Ph. Eblan. (Turpethum Minerale) Vitriolated Quicksilver. Yellow Sub-Sulphate of Quicksilver. Sub-vitriolated Quicksilver. Obtained by dissolving quicksilver in vitriolic acid (sulphuric acid) evaporating to dryness, then adding a large quantity of boiling water, and afterwards

repeatedly washing the yellow powder with distilled water till it becomes tasteless. This mercurial preparation is not a simple oxyd, but retains a small portion of vitriolic acid (sulphuric acid) so as to be in the state of a Sub-sulphate. It was formerly prescribed as an emetic, in doses of three, four, or five grains, in swellings of the testicles from a venereal origin; but as the benefit derived from it in these cases, was solely attributable to the nausea and vomiting, and as these effects can be as powerfully, and less hazardedly, produced by other means, it is now wholly laid aside.

(f) *Calomelas.* Ph. Lond. *Sub-murias Hydrargyri*, Ph. Ed. *Hydrargyrum Muriatum Mite Sublimatum*, Ph. Eblan. (Mercurius dulcis) Calomel. Submuriate of Quicksilver. Mild sublimated muriated Quicksilver. Obtained by triturating pure quicksilver with muriated quicksilver, and afterwards subjecting the mass (each time rubbed to a powder) to four sublimations, as directed by the London college, but only once or twice as directed by the Ed. and Dub. colleges. After the last sublimation, the product is to be washed with boiling distilled water. This is a submuriate of quicksilver, a small portion of muriatic acid being retained by the oxyd. It is by far the most useful of all the mercurial preparations, and with it alone many practitioners rest contented. We will not go so far as to say that, whoever is provided with this may dispense with all the rest; but we may venture to assert, that the long list of mercurials might, with as much safety to the sick as convenience to the physician,

be reduced to three preparations, viz. triturated quicksilver, muriated quicksilver, and calomel.

As a sialagogue, calomel is given in doses of half a grain or a grain twice or thrice a day. The best mode of prescribing it is in pills. As it is apt to pass off readily by the bowels, it is commonly necessary to join a small quantity of opium with it.

During the use of calomel the patient should abstain from acids, and all acescent food. It is scarcely necessary to add, that cold should at all times be guarded against, during a mercurial course; and that the diet should be mild, but nourishing, consisting almost entirely of milk and farinaceous and mucilaginous matters.

Calomel is eminently useful (1) in the lues venerea, (2) in convulsive disorders, such as epilepsy, tetanus, trismus, and hydrophobia; (3) in dropsical affections, such as ascites, hydrocephalus, and hydrops ovariorum; (4) in various cutaneous diseases, such as lepra, tinea, scabies; (5) in some painful complaints, such as odontalgia, chronic rheumatism, arthritis, &c. (6) in visceral obstructions and inflammations, such as obstruction and inflammation of the liver, jaundice, scrophulous ophthalmia, &c. (7) in febrile diseases, such as agues, bilious fever, yellow fever, small-pox, dysentery, &c. (8) and lastly, in worms.

Various adjuncts are prescribed with it, according to the different nature of the disease. Opium is a

a very general addition to it in lues venerea, and other cases, where the intention is to have it absorbed, and not to have it act as a purgative. In hydropic disorders it is joined with squill and other diuretics; in lepra and some other cutaneous affections, with guaiacum; in chronic rheumatism, with the Peruvian bark; in hepatitis, pleurisy and croup with preparations of antimony; in bilious fevers and the yellow fever, with jalap and antimonial powder; and lastly in worm-cases, with scammony, aloes and gamboge. *Hoffman de Mercurio Dulci*, 1700. *Alberti de Mercurii Dulcis Usu* 1745. *Hildebrand Dulcis Mercurii Laudes* 1794.

(g) *Hydrargyrus Muriatus Mitis*, Ph. Lond. *Submurius Hydrargyri Præcipitatus*, Ph. Ed. *Hydrargyrum Muriatum Mite Præcipitatum*, Ph. Eblan. Mild Muriated Quicksilver. Precipitated Submuriate of Quicksilver. Precipitated Mild Muriated Quicksilver. This is prepared by adding a boiling solution of quicksilver in diluted nitrous acid to a strong solution of sea salt (muriate of soda) in boiling distilled water. The precipitate which is obtained on mixing the two solutions together is muriate of quicksilver with excess of oxyd. By repeated ablutions with hot water the muriate of quicksilver is dissolved, and the oxyd of quicksilver combined with a small proportion of muriatic acid in the form of submuriate of quicksilver, is collected and dried upon blotting paper. This preparation coincides in chemical composition and medicinal properties with the sublimate of quicksilver obtained by sublimation, and generally known by the name of

calomel. As the precipitated submuriate is subject to great variation in strength, according as it is prepared by different chemists, and as it possesses no advantages, if ever so accurately prepared, over calomel, we cannot but consider it as a superfluous addition to the catalogue of mercurial medicines. But those who think otherwise should attend to the remarks concerning its preparation in *Dr. Duncan's New Dispensatory*.

(4) *Quicksilver is combined with acids*, under the form of saline compounds, in the following preparations;

(a) *Hydrargyrus muriatus*, Ph. Lond. *Murias Hydrargyri*, Ph. Ed. *Hydrargyrum Muriatum Corrosivum*, Ph. Eblan. (*Mercurius Corrosivus Sublimatus*). Muriated Quicksilver. Muriate of Quicksilver. Corrosive Muriated Quicksilver. (Corrosive Sublimate). Obtained by dissolving quicksilver 2 parts in vitrollic acid (sulphuric acid) 2 parts and $\frac{1}{2}$ and evaporating to dryness; then mixing (after it is become cold) this product (which is a subsulphate of quicksilver) in a glass vessel, with dried sea-salt (muriate of soda) 4 parts, and subjecting the mixture in a glass cucurbit, to sublimation. In this process, the salt which comes over by sublimation, is muriated quicksilver, and the substance which remains behind is vitriolated natron (sulphate of soda). This is a preparation of considerable use; but, as it possesses great virulence, it can only be given in very minute doses, such as an eighth or a quarter of a grain. In this way, three

quarters of a grain, or a whole grain, may be administered in the course of twenty-four hours; a greater quantity disorders the stomach and bowels.

Muriated quicksilver arrests the progress of the venereal disease more quickly than any other preparation of quicksilver, without affecting the salivary glands. Hence where the symptoms are very urgent, it is preferable to every other mercurial. It has also this further advantage, that it is not necessary for the patient to be under much restraint during its use. These are strong recommendations. But, on the other hand, if its effects soon take place, they likewise soon cease. Hence the disease frequently re-appears after discontinuing its use; so that although it be the most convenient, it is not always the surest remedy against the venereal disease.

There are two modes of prescribing muriated quicksilver, viz. either in solution or in pills. *Van Swieten's* celebrated solution is prepared by dissolving this mercurial salt in proof spirit or brandy. Every ounce of the solution contains half a grain of muriated quicksilver; so that if a table spoonful (i. e. half an ounce) be given at a time, the patient will take a quarter of a grain for a dose, which may be repeated night and morning. After each dose, the patient should dilute largely with some mucilaginous liquor, such as gruel, mallow-tea, or decoction of sarsaparilla. Of this solution it may be remarked, that it will in general be more convenient to have it made with a double quantity of spirit, as the mercurial salt may then be given in

more divided doses, viz. only the eighth part of a grain at a time. The sensible operation of this medicine is by urine. Where it occasions sickness, griping, or purging, the dose must be diminished, and a little opium joined with it. Where there is any tendency to spitting of blood, its use is improper.

As the *spirituous solution* of this mercurial salt is very nauseous, the *aqueous solution* is now generally preferred. It is made with distilled water alone, or with some distilled water in which some muriate of ammonia has been previously dissolved. By being impregnated with the ammoniacal salt, the water dissolves the muriated quicksilver more completely. In either of these ways, a solution may be prepared in any given proportion. The most convenient is, one grain of the muriated quicksilver to four ounces of water. Of this one table spoonful (i. e. the eighth part of a grain) is an ordinary dose.

If the form of pills be preferred, dissolve six grains of muriated quicksilver, and an equal quantity of muriate of ammonia in sixty drops of distilled water, add as much crum of bread or biscuit powder as will make the whole into a paste of a proper consistence, and divide into forty-eight pills. As each pill contains the eighth part of a grain, the doses may be regulated with great exactness. *Jacobi Methodus mercurium sublimatum corrosivum tutius copiosiusque exhibendi, 1778.*

Muriated quicksilver is given in either of the ways above described, not only in lues venerea, but

in a great variety of other disorders, and particularly in cutaneous diseases, old ulcers, scrophulous and cancerous sores (*Whytt. Gooch*) chronic rheumatism, arthritis, &c. It is applied topically, as a collyrium, in venereal ophthalmies; as a gargle, in venereal sore throats; as an injection, in gonorrhœa; as a wash and bath, in the itch and other cutaneous diseases; and lastly, as a clyster, in cases where the stomach is too irritable to bear it. (*Van Horne*).

The *Aqua Ophthalmica Mercurialis* of the foreign dispensatories, consists of one grain of muriated quicksilver, dissolved in from four to six ounces of distilled water.

¶ The *Aqua Phagedænica* of the old pharmacopœias, was made by adding half a drachm of this mercurial salt to a pint of lime water. In this preparation, greatest part of the muriated quicksilver is decomposed. It is a bad composition, and is deservedly thrown out of the late improved pharmacopœias. It is still employed abroad as a wash for foul ulcers, whether venereal or not; but the purposes for which it is designed, may in all cases be more effectually accomplished by a weak solution of muriated quicksilver in distilled water.

For other observations on the employment of muriated quicksilver, the reader is referred to the works of *Turner, Van Swieten, de Haen, Pringle, John Hunter, Bell*, and *M^r. John Pearson*; to *Storch's Annus medicus secundus, Locher's Observationes practicæ, 1762, Buchner de mercurii subli-*

mati corrosivi usu medico interno, 1758. *Le Begue de Presle* de l'usage interne du mercure sublimé corrosif, 1763; and, lastly, to *Gardane's* Recherches pratiques, &c. 1772.

¶ (b) *Hydrargyrus acetatus*, Ph. Lond. *Acetis Hydrargyri*, Ph. Ed. *Hydrargyrum acetatum*, Ph. Eblan. Acetated Quicksilver. Acetite of Quicksilver. According to the formula of the London college, this preparation is obtained by dissolving $\frac{1}{2}$ lb. of quicksilver in an equal weight of diluted nitrous acid, and then adding to the solution 3 ounces of acetated kali (acetite of potass) dissolved in 2 pounds of tepid distilled water. The precipitate is acetated quicksilver, which is to be first washed with cold water and afterwards dissolved in a sufficient quantity of distilled water boiling hot. This liquor being filtered through paper, is set aside to crystallize. The Dublin formula is nearly the same; but the proportions are different in the Ed. pharmacopœia; which, however, it is not necessary to particularize, as this mercurial preparation is seldom prescribed, calomel being in all cases preferable. It may very well be dispensed with. Dose, from 1 grain to 3 or 4 grains.

Among the mercurial preparations there remains yet to be noticed the

(c) *Unguentum Hydrargyri Nitrati*, Ph. Lond.

et Eblan. *Unguentum Nitratis Hydrargyri fortius*, Ph. Ed. (*Unguentum Citrinum*) Ointment of Nitrated Quicksilver. Stronger Ointment of Nitrate of Quicksilver (Yellow Ointment). Obtained, according to the Lond. and Dublin pharmacopœias, by dissolving 1 part of quicksilver in two parts of nitrous acid, and then mixing with the solution, while it is yet hot, 12 parts of hog's lard, previously melted, and on the point of becoming stiff. In the Edinburgh formula there are 9 parts of olive-oil and 3 parts of hog's lard to 1 part of quicksilver and 2 parts of nitrous acid. The *Unguentum Nitratis Hydrargyri mitius*, Ph. Ed. is prepared with a triple quantity of oil and hog's lard. It is chiefly used against inflamed and ulcerated eyelids, to which it is applied, in very small quantities, by means of a hair pencil. Also in tinea capitis and other crustaceous eruptions.

In the preceding account of quicksilver, notice has been taken of all those preparations which are in most estimation and in general use. There are several, however, which have purposely been passed by, from a conviction that the catalogue is already too crowded without them. Those who wish to become acquainted with the preparations which have been here omitted, will find them in *Schwediaur's* Table of the Preparations of Mercury, in his Treatise on the Venereal Disease, 1794, in *Baldinger's* *Historia Mercurii et Mercurialium Medica*, 1785. See also *Gmelin's* *Apparatus Medicaminum*, Vol. II. and for excellent practical remarks on the relative medicinal

powers of the different mercurial preparations, see Mr. *John Pearson's* Observations on the Effects of Various Articles of the *Materia Medica*, in the cure of the *Lues Venerea*.

EXPECTORANTS.

(1) *From the Animal Kingdom.*

¶ *ONISCUS Asellus.* (Millepeda) Woodlouse.
 MEL. Honey.

(2) *From the Vegetable Kingdom.*

ALLIUM sativum. Garlick.
AMMONIACUM. Gum Ammoniac.
ARUM maculatum. Wakerobin.
CALLICOCCA Ipecacuanha. Ipecacuanha.
 ¶ *COLCHICUM autumnale.* Meadow Saffron.
 ¶ *COPAIFERA officinalis.* Balsam of Copaiya.
FERULA asa fetida. ~~Asa~~ fœtida.
MYRRHA. Myrrh.
NICOTIANA Tabacum. Tobacco.
POLYGALA Senega. Seneka.
SCILLA maritima. Squill.
 ¶ *STYRAX Benzoe.* Benzoin.
 ¶ ——— *officinalis.* Storax.
TOLUIFERA Balsamum. Balsam of Tolu.

(3) *From the Mineral Kingdom.*

ANTIMONIUM ejusque præparata. Antimony and its preparations.
HYDRARGYRUS. Quicksilver.
 ¶ *ASPHALTUM.* Jewspitch.

<i>ÆTHER vitriolicus,</i> Ph Lond. Vitriolic Ether.		<i>Æther Sulphuricus,</i> Ph. Ed. Sulphuric Ether.
<i>Liquor Æthereus Vitriolicus,</i> Ph. Eblan. Vitriolic Ethereal Liquor.		

C. EXPECTORANTS or Anacathartics are substances which are prescribed to promote the ejection of mucous or purulent matter from the lungs. Accordingly they are much employed in asthma, catarrh, pneumonia and phthisis pulmonalis. Some of them are suited to some forms of pulmonary disease; others to other forms. Many of them which are of a stimulant nature, are inadmissible while active inflammation subsists; and most of them on account of their nauseating and purgative tendency, require small doses of opiates to be joined with them.

(1) *From the Animal Kingdom.*

¶ ONISCUS *Asellus*. Ph. Lond. et Ed. Insecta aptera (Millepeda). The Wood-louse or Slater. This insect was formerly prescribed in humoral asthma, (*Mayerne*) whooping cough (*Willis*) and other pulmonary diseases; but it is now quite out of use either as an expectorant or diuretic. Dose 20 or 30 grains.

Woodlice are prepared for medicinal use, by putting them into a thin canvas bag, and hanging them over the steams of spirit of wine, made hot, till they are killed and become friable.

¶ MEL. Honey. (See p. 52). Usually considered as an expectorant, but seldom serviceable, often hurtful, when prescribed as such. For *mel acetatum* see DIAPHORETICS.

(2) *From the Vegetable Kingdom.*

ALLIUM sativum. Hexandria Monogynia. Li-
liaceæ. Sicily. (Radix). Garlick. Given raw,
or boiled with milk or broth, in pituitous asthma
and catarrh. (*Mead. Rosenstein*). The *Syrupus*
Allii of the Swedish pharmacopœia, is made by
steeping in a covered vessel, a pound of fresh gar-
lick, bruised in 2 pounds of hot water, and after-
wards adding a sufficient quantity of sugar to
the strained liquor. It is given in doses of one
or two drachms. There is a similar preparation in
the Dublin pharmacopœia.

AMMONIACUM. Gummi-resina. Gum Ammo-
niacum. The plant which yields this gum resin,
remains yet unknown. It is brought to us from
the East Indies, and from Æthiopia, Egypt, and
other parts of Africa. This gum-resin is one of the
most valuable expectorants in the whole materia
medica. It is only surpassed by the squill in some
cases, and by assa fœtida in others. It is prescribed
in asthmas, in chronic catarrhs, in the hooping
cough, peripneumonia notha, and in some stages
of phthisis pulmonalis. It is given either in the
form of a milky liquor, made by triturating it with
water, or in pills. In the former mode it is fre-
quently joined with oxymel of squill, with tartarised
antimony, with camphorated tincture of opium, &c.
In the latter, it is combined with the fresh or dried
squill, with assa fœtida, with myrrh, &c. Dose,

ten grains to half a drachm. The *Lac Ammoniæ*, Ph. Lond. (ammoniacum-milk) consists of two drachms of ammoniacum triturated with half a pint of water. Dose, from half an ounce to an ounce and a half.

This gum-resin is an ingredient in the *Pilulæ Scillæ*, Ph. Lond. Ed. et Ebl. and in the *Emplastrum Ammoniæ cum Hydrargyro*, Ph. Lond. and *Emplastrum gummosum*, Ph. Ed.

In large doses ammoniacum purges; hence, when it is prescribed as an expectorant, it should be given in small quantities, frequently repeated. It is not proper where there is much inflammation, for then it irritates without unloading the lungs.

ARUM maculatum. Gynandria Polyandria. According to *Linnaeus* (the Son) and *Stokes* in *Withering*, it belongs to Monœcia Monandria Piperitæ. Indigenous. (Radix). Wake Robin, or Cuckow Pint. The fresh root of this plant has been prescribed with advantage in humoral asthmas. It may be given in doses of fifteen or twenty grains three times a day. It is generally combined with gum arabic or some other mucilage, which blunts and moderates its acrimony. When given in a solid form, the patient should dilute with a decoction of barley or gruel. Perhaps the best mode of exhibiting it, is to triturate it, after the manner of *Lewis* (Dispensatory, p. 608, fourth edition) with gum arabic and water, so as to form an emulsion.

The *Conserva Ari*, Ph. Lond. is made by beating up the fresh root with three times its weight of fine sugar. Dose, thirty grains to a dram. The *dried* root possesses little or no virtue.

CALLICOCCA Ipecacuanha. Brotero. (Cephaëlis *Ipecacuanha Willdenow*). Pentandria Monogynia. Aggregatæ. Brazil. (*Ipecacuanha. Radix*). *Ipecacuanha*. Given in small doses of 2 or 3 grains, *ipeacacuanha* operates beneficially as an expectorant in asthma, hooping-cough, and other pulmonary affections. An infusion of the root, saturated with sugar, is a useful formula for children. See EME-TICS.

¶ *COLCHICUM autumnale.* Hexandria Trigynia Liliaceæ. Indigenous. (*Radix*). Meadow Saffron. Has been given with good effect in humoral asthmas. (*Storck*). The *Oxymel Colchici*, Ph. Lond. is made by steeping one ounce of the sliced root in one pint of vinegar, and afterwards adding to the liquor filtered and expressed from the root, two pounds of honey, and boiling the whole to a proper thickness. Dose, one or two drachms. The *Syrupus Colchici autumnalis*, Ph. Ed. is made by macerating 1 ounce of this root in 16 ounces of vinegar, and afterwards adding to the filtered liquor twenty-six ounces of sugar, and boiling it to the consistence of a syrup. It may be given in the same quantities as the oxymel. As the active particles of the colchicum are of a volatile nature, the boiling in both these preparations should, if possible, be avoided. They must always vary in strength according to the greater or less degree of coction. Is

it owing to this circumstance, or to a variation of activity in the root, from a difference of soil and situation, that the results of the trials with it have been so different in different hands? That it naturally possesses great acrimony, we have incontestible proof; hence considerable caution is necessary in using it. At first, the dose may be a drachm of the oxymel or syrup, taken in an ounce or two of some aromatic water, twice or thrice a day. After a little time, the quantity may be doubled, tripled, or quadruplicated, according to its effects. As the dose is increased, the intervals between the repetitions should be lengthened, as large doses have sometimes a very sedative effect. After all, from the experience we have had of it, we are induced to think it inferior, both as an expectorant and diuretic, to the squill, and therefore set it aside as superfluous. *Storck* Libellus de Colchici autumnalis radice, 1763. *Ehrmann* de Colchico autumnali, 1772, and afterwards reprinted in *Baldinger's* Sylloge Opusculorum argumenti Medico-Practici, Vol. V.

¶ *COPAIFERA officinalis.* Decandria Monogynia. Dumosæ. Arbor. Brazil, and other parts of South America. (Balsamum copaivæ). Balsam of Copaiva. The observations on the use of the *TOLUIFERA Balsamum*, as an expectorant, will apply here. - To that article therefore the reader is referred.

FERULA Assa foetida. Pentandria Digynia. Umbellatæ. Persia. (Assa foetida. Guinni-resina). Assa foetida. The juice which flows from the

wounded root, inspissated and concreted by the heat of the sun. This gum-resinous concrete is an excellent expectorant in asthmatic cases, and has been prescribed with good effect in the hooping-cough and croup. From ten to twenty or thirty grains are given for a dose, either in pills or triturated with water, so as to form a milky liquor. On account of its stimulant properties, it is often useful to join antimonials with it. This gum-resin is an ingredient in the *Pilulæ Galbani compositæ*, Ph. Lond. the *Pilulæ Asæ Fœtidæ compositæ*, Ph. Ed. (formerly called *Pilulæ Gummosæ*) and the *Emplastrum Asæ Fœtidæ*, Ph. Ed. The other official preparations from this drug, are, the *Lac Asæ Fœtidæ*, Ph. Lond. which is made in the same manner, and in the same proportions as the ammoniacum-milk; dose, half an ounce or an ounce; the *Tinctura Asæ Fœtidæ* Ph. Lond. Ed. et Eblan. of which one or two drachms are given for a dose; and the *Spiritus Ammoniacæ Fœtidus*, Ph. Lond. *Alcohol Ammoniatum Fœtidum*, Ph. Ed. *Sp. Alkali Volatilis Fœtidus*, Ph. Eblan. of which from fifteen to fifty drops may be given for a dose. Of all these preparations the composition and doses will hereafter be mentioned under STIMULANTS and ANTISPASMODICS.

LICHEN Islandicus. Iceland Liverwort. Iceland Moss. See DEMULCENTS.

MYRRHA. Gum Myrrh. See TONICS.

NICOTIANA Tabacum. (see p. 120). Tobacco. When tobacco is used as an expectorant, it should be deprived of its saline matter, and more espe-

pecially of its volatile acrimonious oil, otherwise it proves too irritating for many pulmonary diseases. It is deprived of these irritating particles in the preparation of the *Extractum Nicotianæ* of the foreign pharmacopœias. This is made by macerating the dried leaves for one night in six times their weight of water, and turning them out the next morning upon a sieve, that the water may drain from them. The leaves, thus washed and macerated, are then boiled very briskly in ten times their weight of pure water, till half is evaporated, when the decoction is strained. (The clarification with the white of eggs is an unnecessary trouble). Lastly, this decoction is afterwards inspissated to the consistence of an extract; which has been given with good effect in pituitous asthmas, chronic catarrhs, hooping cough, and in some cases of phthisis. (*Schulz. Rosenstein. Cullen*). Dose from one to 3 or 4 grains. The *Syrupus Nicotianæ* of the *Dispensatorium Fuldense* is made by boiling half an ounce of tobacco leaves in six ounces of water for one hour. This first decoction being poured off and thrown away as useless, to the remaining tobacco-leaves are added one ounce of liquorice root and 12 ounces of boiling water. These are boiled together till about a fourth part of the water has evaporated, when 8 ounces of honey are added to the expressed and filtered liquor; after which the whole is boiled down to the consistence of a syrup. Dose, to children from one to two drachms; to adults, from three drachms to half an ounce. For other observations on tobacco, see DIURETICS.

POLYGALA *Senega.* Diadelphia Octandria. Lo-

mentaceæ. Virginia, Pennsylvania, Maryland, and other parts of North America. (*Seneka. Radix.*) *Seneka*, or Rattle-snake Root. This root is frequently employed with advantage in pleurisies, peripneumonies, humoral asthmas and croup. (*Archer*). In the first two disorders, it is scarcely necessary to remark, that it should not be administered until the inflammation has been abated by venesection and other means. (*Tennent, Bouvart, Percival*). The best mode of prescribing it is in decoction. In the *Decoctum Senekæ*, Ph. Ed. the proportions are one ounce of the root to two pounds of water, boiled down to sixteen ounces. Of this, an ounce or an ounce and a half may be given every second or third hour. It commonly operates both by expectoration and urine. When it purges, the dose should be diminished; and if, notwithstanding, it should continue to pass off too readily by the bowels, it should be discontinued. Where there is much febrile affection, an antimonial, such as the *vinum antimonii*, may be advantageously joined with it; but in very small quantity, as the decoction itself in some constitutions produces nausea and sickness; which, however, may generally be prevented by the addition of some syrup of white poppy; or a small quantity of the *tinct. opii camphorata*. *Tennent's Physical Disquisitions*, 1738, *Linnaeus* de Senega in *Amœnitat. Acad.* Vol. II. For other remarks on this root, see DIURETICS and DIAPHORETICS.

SCILLA maritima. Hexandria Monogynia. Liliaceæ. Portugal, Spain, Italy. (*Radix*). Squill. The bulbous root of this plant is one of the most

useful expectorants in the materia medica; yet it often fails in the hands of ordinary practitioners, from one or other of the following cases, viz. First, owing to some improper condition of the patient; secondly, owing to a depravation of the drug by long keeping or pharmaceutical treatment; and, thirdly, owing to the neglect of combining it with suitable auxiliaries. As to the first of these circumstances, viz. the particular condition of the patient, it is a matter of more moment than is commonly apprehended. The squill root possesses great acrimony,* and stimulates powerfully; so that where there is much febrile or inflammatory affection, or great irritability, it only renders the cough more frequent, and oppresses instead of unloading the lungs. In pleuritic, peripneumonic, and catarrhal cases, when given under the forbidding conditions just mentioned, we have known it to exasperate the fever, and bring on strangury and spitting of blood. It is therefore essentially necessary to the successful operation of this medicine, that inflammation and fever be for the most part subdued previously to its exhibition; and if great irritability prevail, that such other substances be employed in conjunction with it, as are suited to

* In proof of the acrimonious quality of this vegetable, may be mentioned the case related, in the *Annales de Chimie* Juillet, 1799, of a person who after handling some fresh squills had an itching succeeded by very acute pains, in his hands and all along his arm. An itching of the skin, accompanied by an eruption (a species of urticaria) often takes place during its internal exhibition; and convulsions (*Tissot*) and inflammation of the stomach and intestines (*Quarin*) have sometimes occurred where it has been overdosed.

lessen or remove that unfavourable condition of the patient. The first is to be effected by venesection, antimonials, and other evacuants; and to accomplish the latter, camphor and opium may be employed. By due attention to these precautions, the squill root may be administered with the best success in the cases above mentioned, provided it be assisted by plentiful dilution with mucilaginous liquors, a point not sufficiently attended to in ordinary practice.

Squill is not only useful in certain stages and conditions of pleurisy, peripneumony, and catarrh, but also in a great variety of other pulmonary diseases, and especially asthma and hooping-cough.

A second cause of the failure of this drug in many hands, is its depravation by long keeping or by pharmaceutical treatment.

Without great care, the raw root becomes musty or putrid by long keeping, and when in that state it is evident it must be quite unfit for medicinal use.* On the other hand, if the exsiccation be not conducted slowly and with a gentle heat, or, if roots which have been injured in being brought from abroad, or spoiled by being kept in an improper situation, happen to be made use of, then the

* Could this depravation be prevented by triturating the squill, immediately after its exsiccation, with a certain proportion of common salt, (muriate of soda) likewise previously exsiccated. In assigning the doses of this squill-powder due attention must be given to the weight of the muriate of soda.

dried drug will be bad. Thus it is (either from applying too great a degree of heat in the drying, or from the roots being damaged before the drying) that the exsiccated squill often disappoints the prescriber. Yet, when good roots are selected, and the exsiccation is conducted with caution, the dried is, for all medical purposes, far preferable to the raw drug. In like manner, the squill is often impaired by too much heat in the boiling of the oxymel. This circumstance, added to the tendency which this honied preparation has to ferment in warm weather, accounts for the uncertainty of operation which has been sometimes observed in the use of the oxymel scillæ.

A third cause of failure in the exhibition of squill, is a neglect to combine it with suitable auxiliaries. Thus, where there is any febrile affection, it seldom succeeds unless neutral salts are added to it, and copious dilution with mucilaginous liquors is enjoined. Our method, in these cases, is to direct the dried squill to be triturated to a powder with nitre or vitriolated kali, and to be taken in a large draught of decoction of barley. We have already hinted at other additions to it, such as camphor and opium, where instead of inflammation, there is great irritability. On the other hand, in asthmas, attended with corpulency and a cachectic condition, mercurials are added with advantage. In these cases (as well as in dropsies) triturated quicksilver is commonly employed; but of all the mercurial preparations we have found calomel in small quantities to promote most effectually the operation of the squill. For this purpose we give

half a grain of calomel and one or two grains of dried squill, with three grains of aromatic powder, made into two pills, twice, or if the symptoms are urgent, thrice in the space of twelve or fourteen hours.

The *fresh* or *raw* root is given in doses of five to fifteen grains; the *dried* root in doses of one to five grains.

In our pharmacopœias, we have the following preparations of this root, viz. the *Conserva Scillæ*, Ph. Lond. which consists of one part of fresh squill and five parts of fine sugar. Dose, from 15 grains to half a drachm. *Pilulæ Scillæ*, Ph. Lond. and *Pilulæ Scilliticæ*, Ph. Eblan. which consist of one part of dried squill, ginger and soap, each, three parts, ammoniacum two parts, beaten up with syrup of ginger. The *Pilulæ Scilliticæ*, Ph. Ed. are composed of dried squill one part, gum ammoniacum, lesser cardamom-seeds, and extract of liquorice, each three parts, beaten up with simple syrup. The pills of either pharmacopœias, may be given in doses of five to fifteen grains. The *Acetum Scillæ*, Ph. Lond. is made by macerating for twenty-four hours, with a gentle heat, one pound of dried squill in six pints of vinegar, and afterwards adding to the expressed liquor half a pint of proof spirit. Half a drachm or a drachm is a common dose. It is stronger than the *Acetum Scillæ maritimæ*, Ph. Ed. which is made by macerating for seven days, two ounces of the dried root in two pounds and a half of distilled vinegar, and afterwards adding to the expressed liquor 3 ounces of alkohol. One or two

drachms may be given for a dose. The proportions in the *Acetum Scilliticum*, Ph. Eblan. are, dried squill half a pound, vinegar three pounds, proof spirit four ounces. The maceration is continued for four days.

¶ The *Mel Scillæ*, Ph. Lond. *Mel Scilliticum*, Ph. Eblan. is made by boiling three pounds honey and two pints tincture of squill, to the consistence of a syrup. Dose, a drachm. This preparation may well be dispensed with. *Oxymel Scillæ*, Ph. Lond. is prepared by boiling three pounds honey with two pints vinegar of squill. Dose, from one to two drachms. Of the honied preparations of this and other drugs, it may be remarked, that as they are very liable to spoil by long keeping, and, in respect of efficacy, have no advantage whatever over the saccharine compositions, we are surprised to see so much partiality for them among our countrymen. Honey, so far from favouring, frequently thwarts the operation of the squill, in consequence of its heating and irritating effects. Howsoever highly it might formerly be esteemed as a pectoral, when its nature and action were not properly understood, honey has now justly fallen into disuse in pulmonary diseases, with most physicians of the present day. Accordingly the Edinburgh college has rejected all the old honied preparations, and substituted saccharine preparations or syrups in their stead. In the Edinburgh pharmacopœia there is no *mel scillæ*, no *oxymel scillæ*, but in their place a *Syrupus Scillæ maritimæ*, which is made by dissolving with a gentle heat three pounds and a half of fine sugar in two pounds of vinegar of squill. One or two drachms

of this may be given for a dose. The last preparation of this drug which remains to be noticed, is the *Tinctura Scillæ*, Ph. Lond. an elegant and efficacious composition. It is made by digesting, for eight days, four ounces of dried squill in two pints of proof spirit. Dose, from thirty to sixty drops. It is more used as a diuretic than as an expectorant. In the *Tinctura Scillæ*, Ph. Eblan. the proportions are dried squill four ounces, proof spirit two pounds, digested together for seven days. The *Extractum Scillæ* of the foreign dispensatories is a preparation of little activity. *Wagner de Scilla apud Haller. Disput. Vol. II, Sculze ibidem. Ludwig Adversaria, Vol. II. Quarin Animad. Pract. Cap. VII et VIII.* For other remarks on Squill, see DIURETICS.

STYRAX *Benzoe*. Decandria Monogynia. Bicornes. Arbor. In the island of Sumatra, and other parts of the East Indies. (*Benzoe. Benzoinum. Assa dulcis*). Benzoin or Benjamin. The balsam itself, in the state in which we receive it from abroad, is seldom employed internally; but the essential salt or acid obtained by sublimation is administered internally, in asthma and other pulmonary affections. This sublimated acid of benzoin is the *Flores Benzoës*, Ph. Lond. *Acidum Benzoicum*, Ph. Ed. and *Sal Benzoini*, Ph. Eblan. From five to fifteen grains may be given for a dose, in the cases abovementioned. In larger doses it stimulates considerably, and generally it does more harm than good where there is inflammation or great irritability. It seems to act rather as an antispasmodic than as an expectorant. Its place, in most instances, may be

better supplied by camphor. See ANTISPASMODICS.

This balsam is an ingredient in the *Tinctura Benzöes composita*, Ph. Lond. et Ed. (formerly called *Balsamum Traumaticum*) which is chiefly used as an external application. See STIMULANTS. And the essential salt or acid enters into the *Tinctura Opii Camphorata*, Ph. Lond. and the *Tinctura Opii Ammoniata* Ph. Ed. (formerly called *Elixir Paregoricum*) the composition of which is particularised under the article opium. They are given in doses of a drachm, in asthmatic affections, chronic catarrhs, and phthisical cases.

¶ *STYRAX officinalis.* Class and natural order, as the last. Æthiopia, Palestine, and Southern parts of Europe. (Balsamum) Storax. This balsamic substance was formerly in great repute as a pectoral, but is now very generally rejected as such. Dose, ten or fifteen grains. It is an ingredient in the *Tinctura Benzöes composita*, Ph. Lond.

TOLUIFERA Balsamum. Decandria Monogynia. Lomentaceæ. Arbor. In the province of Tolu, in South America. (Balsamum tolutanum. Liquor balsamicus ex arbore sauciatâ stillans). Balsam of Tolu. A balsamic liquor flowing from the wounded tree. On account of its heating and stimulating properties, this, like all the other balsams, can seldom be used with propriety as an expectorant. If it is suited to any pulmonary diseases, it is to such as are unattended with fever and inflammation.

From fifteen to thirty or forty drops, made into an emulsion with yolk of egg or gum arabic and water, may be given for a dose. The *Tinctura Balsami Tolutani*, Ph. Lond. et Eblan. *Tinctura Toluiferæ Balsami*, Ph. Ed. are seldom used as expectorants. See STIMULANTS, where their composition is noticed. The *Syrupus Tolutanus*, Ph. Lond. (formerly called *Syrupus Balsamicus*) is made by boiling eight ounces of the balsam in three pints of water, in a covered vessel, and afterwards adding to the filtrated liquor a sufficient quantity of sugar. *Syrupus Toluiferæ Balsami*, Ph. Ed. is prepared by mixing one ounce of the tincture of balsam of tolu with two pounds of common syrup. Dose of either preparation one or two drachms.

TUSSILAGO *Farfara*. Coltsfoot. See DEMULCENTS.

(3) *From the Mineral Kingdom.*

ANTIMONIUM. (Stibium). Antimony. For general observations on this metallic substance, see DIAPHORETICS. In this place it is proper to take notice of two of its preparations only, viz. (1) *Sulphur Antimonii præcipitatum*, Ph Lond. *Sulphuretum Antimonii Præcipitatum*, Ph. Ed. *Sulphur Stibiatum Rufum*, Ph. Eblan. Precipitated Sulphur of Antimony. Precipitated Sulphuret of Antimony. Golden-coloured Stibiated Sulphur. (formerly called *Sulphur Auratum Antimonii*) which is made by boiling antimony (sulphuret of antimony) reduced to powder, in a strong ley of pure kali (water

of potass) and then gradually dropping into the strained liquor as much diluted vitrollic acid (sulphuric acid) as is sufficient for precipitating the sulphurated metal, which is afterwards washed with hot water. The alkali unites, during the boiling with the antimony, (sulphuret of antimony) and forms with it a hepar, which is dissolved in the water employed in the decoction, but is decomposed on the addition of the vitriolic acid (sulphuric acid) which seizes the kali (potass) whereupon the sulphur that was previously contained in the antimony, ceases to be soluble in the water, and accordingly falls down to the bottom along with some of the metallic particles. This preparation differs from crude antimony (i. e. native sulphuret of antimony) in as much as the metal is here not united with the sulphur in a reguline state, but in the state of an imperfect oxyd. Precipitated sulphur of antimony is given in asthma and other pulmonary disorders to promote expectoration, in doses of one, two, or three grains. In larger quantities, it causes sickness and vomiting. It is an uncertain preparation; and perhaps its place may at all times be better supplied by tartarized antimony.

¶ *Sulphur Stibiatum Fuscum*, Ph. Eblan. Brown Stibiated Sulphur (Kermes Minérale. Pulvis Carthusianorum). This preparation is analogous to the preceding. It is made by boiling antimony (sulphuret of antimony) reduced to powder, in a strong ley of mild vegetable alkali (carbonate of potass) then filtrating the liquor, and letting it stand at rest, in a cool place to deposit. The sedi-

ment which is let fall is the kermes minerale, of which the doses and uses are the same as those of the precipitated sulphur of antimony.

ANTIMONIUM *tartarisatum*, Ph. Lond. *Tartris Antimonii*, Ph. Ed. *Tartarum Stibiatum*, Ph. Eblan. Tartarised Antimony. Tartrate of Antimony. Stibiated Tartar. (Tartarus Emeticus). This antimonial salt is obtained by boiling oxyd of antimony in a solution of crystals of tartar (supertartrate of potass) in water. The oxyd employed in this preparation by the Lond. and Ed. colleges is the crocus antimonii, that which is employed by the Dublin college, is the precipitated calx of antimony. It has been shown by recent chemical analysis to be a triple salt, consisting of oxyd of antimony, tartaric acid and potass. According to whatsoever formula tartarized antimony is made, it is a preparation which, in small dozes (viz. a sixteenth, an eighth, or a quarter of a grain) operates powerfully as an expectorant in pulmonic disorders accompanied with inflammation, such as pleurisy, peripneumony, and catarrh. It is also of great service in the whooping cough and croup, and in some kinds of asthma. It may be given in a liquid form, in conjunction with camphor, ammoniacum, or assa foetida. For other observations on tartarised antimony, see DIAPHORETICS.

HYDRARGYRUS. (See p. 125). Quicksilver. Some of the preparations of this metal, such as the *Pilulæ Hydrargyri* (p. 127) and *Calomel* (p. 137) are given with good effect to promote expectoration in asthma and other pulmonary diseases, either alone

or in conjunction with ammoniacum, squill, and antimonials. It is proper to notice, that when quicksilver is employed as an expectorant, it should be in small doses, viz. about five grains of the triturated preparation, and half a grain of calomel, or submuriate of quicksilver.

ZINCUM vitriolatum, Ph. Lond. et Eblan. *Sulphas Zinc*, Ph. Ed. (Vitriolum Album) Vitriolated Zinc. Sulphate of Zinc. (White Vitriol) In nauseating doses this metallic salt operates as an expectorant. See EMETICS.

¶ ASPHALTUM. (Bitumen Judaicum). Jews Pitch. This bituminous substance has been given by some practitioners, in doses of ten or fifteen grains, triturated with sugar, in some pulmonary disorders; but this practice is, in our opinion, not very commendable. The empyreumatic oil, *Oleum Asphalti*, obtained by distilling the asphaltum by itself, is a medicine of more note; though we will not assert that, as an expectorant, it is of more efficacy. On account of its stimulant and heating qualities, it certainly cannot be proper in inflammatory affections of the lungs; and notwithstanding all that has been said in favour of it in phthisis pulmonalis by *Courcelles* (*Acta Societatis Med. Hafniensis*, Vol. II.) *Healde* (on the use of oleum asphalti in ulcers of the intestines, lungs, &c. 1769) *Lentin* (*Memorabilia circa morbos Clausthalensium*, 1779) and others, we have never yet been induced to prescribe it in consumptive cases, from a persuasion that it coincides in its general qualities with the tolu and other balsams. Yet, that we may not

appear to under-rate the value of this article too much, we shall here insert the observations which Dr. Bang, of Copenhagen has made upon it (*Praxis Medica*, 1789). The *oleum asphalti*, says this author, is perhaps entitled to the first place among the proper antiphthisical remedies. In some instances it answered very well (*quibusdam sufficientem opem præstitit*) in others it afforded relief. It corrects the bad smell of the sputum, and seems to promote its discharge from the lungs; but it does no good where the voice is thick or hoarse, with (much) fever, hæmoptysis, or a disposition thereto; nor, in the last stage of the disease. Six or eight drops may be given night and morning in cold water. It shews its effects in a few days, when, if its operation is favourable, it may be continued for a length of time; if not, it should be laid aside, as it would be of no use to go on with it longer. Other practitioners give this medicine in larger doses, viz. ten or fifteen drops upon a lump of sugar, or mixed up with mucilage.

Æther vitriolicus, Ph. Lond. et Eblan. *Æther Sulphuricus*, Ph. Ed. Vitriolic Ether. Sulphuric Ether. The vapour of vitriolic ether (whether pure or impregnated with cicuta) drawn into the lungs three or four times a day, has been found serviceable in cases of catarrh, phthisis pulmonalis, hooping cough and croup. At each inhalation 2 or 3 teaspoonfuls of ether are used. Medical Facts and Observations, Vol. VII. *Duncan's Annals of Medicine*, Vol. III. *Beddoe's Considerations*, Part III.

For other remarks on the medical uses of ether, see ANTISPASMODICS, under which class the mode of preparing it will be mentioned.

D. EMETICS.

(1) *From the Vegetable Kingdom.*

ANTHEMIS *nobilis*. Chamomile.

CALLICOCCA *Ipecacuanha*. Ipecacuanha.

CENTAUREA *benedicta*. Blessed Thistle.

OLEA *Europæa*. Olive Oil.

SCILLA *maritima*. Squill.

(2) *From the Mineral Kingdom.*

ANTIMONII quædam præparata. Certain preparations of Antimony.

CUPRUM *vitriolatum*, Ph. Lond. et Eblan. Sulphas Cupri, Ph. Ed. Vitriolated Copper. Sulphate of Copper.

ZINCUM *vitriolatum*, Ph. Lond. Sulphas Zinci, Ph. Ed. Vitriolated Zinc. Sulphate of Zinc.

Medicines which excite vomiting are of very extensive use in the practice of physic. They not only prove beneficial in their first operation, by bringing away from the stomach indigested food, mucus and sordes, together with morbid collections of bile; but in their secondary operation also, by promoting perspiration, in febrile diseases; by favouring expectoration in pulmonary disorders; and by bringing the absorbents into action in cases of glandular and lymphatic obstruction. In full doses they are particularly serviceable in the early stage of typhus, scarlatina and catarrhal fever or influenza, and in the advanced stage of cynanche trachealis or croup. When administered in small doses, so as not to excite vomiting, they allay irritability, and abate inordinate arterial and muscular action. Hence their use, when administered in the manner last mentioned, in pulmonary and uterine hæmorrhagè, in spasmodic asthma, whooping cough, and dysentery. *Hoffman* de Vomitor. Usu, 1725. *Roederer* Opuscula. *Fothergill* de Emeticorum Usu, 1736, see his collected works.

(2) *From the Vegetable Kingdom.*

ANTHEMIS nobilis. Syngenesia Polygamia superflua. Compositæ radiatæ. Indigenous (Chamæmelum. Flores) Chamomile. A strong infusion of the flowers, taken warm, is a well known emetic.

CALLICOCCA Ipecacuanha. (see p. 151) *Ipecacuanha.* The root of this plant is a well known safe and efficacious emetic. Its operation is neither

so quick nor so long continued as that of tartarised antimony, nor does it pass off by stool so readily as that. On this last account, it is preferable in many cases, especially when there is no fever, to antimonial vomits; but in febrile and bilious cases, tartarised antimony answers better. It is given in substance, and in aqueous and vinous infusion. Of the powder, the dose to adults, as a full emetic, is from ten to thirty grains; to children, four or five grains: to infants one or two grains. The aqueous infusion, *Infusum Ipecacuanhæ*, is made by steeping one or two drachms of the powdered root in six ounces of water. Two ounces of this infusion are given every half hour till it operates. This is a much weaker preparation than the vinous infusion, or *Vinum Ipecacuanhæ*, Ph. Lond. which is made by macerating for ten days one ounce of the root in one pint of white wine. Dose, an ounce or an ounce and a half. In the Dublin pharmacopœia, the proportions are one ounce of ipecacuanha, to one pound of white wine, the maceration being continued for 7 days. In the Ed. Ph. the proportions are one ounce of the root to 15 ounces of wine, macerated for 7 days. A *Syrupus Ipecacuanhæ* is used as an emetic for children, abroad. It is made by adding a sufficient quantity of sugar to an aqueous infusion, about half as strong as that above mentioned, and is given in doses of half an ounce, more or less, according to the age of the patient. It is a common, and in many cases an useful practice, to add tartarised antimony to the powder and wine, and oxymel or vinegar of squill to the infusion of ipecacuanha. By these additions, its emetic ope-

ration is quickened, and a subsequent action is produced upon the intestines and kidneys.

This root and its preparations, are prescribed in various disorders with good effect, in small doses frequently repeated, so as to excite nausea, but not vomiting. Thus, in (1) dysenteries, four or five grains given every second or third hour, prove an excellent remedy, whether administered alone, or in combination with rhubarb or crystals of tartar. (*Piso. Baglivi. Helvetius. Degner. Zimmerman. Cleghorn. Pringle.* Some of these practitioners gave it in these cases in full doses); in (2) asthma, hooping cough, and other pulmonary affections, two or three grains, taken in a morning, afford great relief (*Pye. Akenside.*) and in (3) hæmorrhages from the lungs and uterus, still smaller doses, such as a single grain, half a grain, or only a quarter of a grain, every second or third hour, have been employed with the best success. (*Dahlberg. Bergius*).

Besides its general use as an emetic and antispasmodic, ipecacuanha is advantageously employed, in combination with other drugs, as a sudorific in podagric, arthritic, and rheumatic cases, and also in typhus and other low fevers. The usual adjunct for this purpose is opium, with a neutral salt, formerly a favourite composition of *Dover's*, and for many years called after his name, but in the new editions of the London and Dublin pharmacopœias, entitled *Pulvis Ipecacuanhæ compositus*, and *Pulvis Ipecacuanhæ et Opii*, Ph. Ed. It consists of one

part ipecacuanha, one part opium, and eight parts vitriolated kali (sulphate of potass). Dose, from ten to twenty or thirty grains. Ten grains contain 1 gr. of opium. This powder has been given not only in the diseases above-mentioned, but also in cases of diabetes, with considerable success. *Duncan's* Comment. Vol. IX. *Buchner* de Ipecacuanhâ, 1745. *Gianella* de admirabili radice Ipecacuanhæ virtute in curandis febribus, in *Haller* Dissert. Pract. Tom. V. *Linnaeus* de Ipecacuanhâ, 1774, and in *Amœn. Acad.* Vol. VIII. See DIAPHORETICS.

CENTAUREA benedicta. Syngenesia Polygamia frustranea. Compositæ Capitatæ. Islands of the Archipelago, Spain, &c. (*Carduus benedictus*. *Herba*). Blessed Thistle. A strong infusion or decoction of this herb provokes vomiting, and may be employed for this purpose in the same manner as chamomile.

OLEA Europæa. Oleum Olivæ. (see p. 104) Olive Oil. From two to four ounces of this oil, taken into the stomach, operate as an emetic, which has been usefully resorted to in cases of gall-stone and of metallic poisons. In the last cases, the dose may be doubled, and should be repeated two or three times.

SCILLA maritima (see p. 155). Squill. As an emetic, this root and its preparations are rarely used by themselves; but the *Oxymel Scillæ* is frequently added, in doses of two or three drachms, to the aqueous and vinous infusions of ipecacuanha; and to solutions of tartarised antimony, by which

means their operation is quickened. When given alone, as much as an ounce of the oxymel will be required to produce full vomiting.

(3) *From the Mineral Kingdom.*

ANTIMONIUM *tartarisatum*, Ph. Lond. (see p. 165). *Tartris Antimonii*, Ph. Ed. *Tartarum Stibiatum*, Ph. Eblan. Tartarised antimony. Tartrate of antimony. Stibiated Tartar. (Tartarus Emeticus). This is a most useful emetic, especially in bilious and febrile cases. It has advantages over ipecacuanha, in being quicker in its operation as an evacuant of the stomach, and in producing afterwards a greater effect upon the bowels, the kidneys, and the skin. One grain, or a grain and a half, is commonly a sufficient vomiting dose for an adult; yet, in some instances, two or three grains are required; and in maniacal disorders, as much as four or five. To children it is given in doses of a quarter or half a grain, according to the age. In all cases the best mode of exhibiting it is in a state of solution. In this way the doses of it are easily regulated, and its operation is rendered quicker and more certain. Thus, if two grains are dissolved in eight ounces of water, and one ounce, or two table spoonfuls are given at a time, the patient will take a quarter of a grain for a dose, which may be repeated every ten minutes until it vomits. If instead of one ounce, twice that quantity, or four table spoonfuls are given, then the dose will be half a grain, which being repeated once, or at most twice, every quarter of an hour, will generally operate sufficiently. Besides its use by itself, tartarised anti-

mony is often added to ipecacuanha to quicken its operation. The *Vinum Antimonii tartaricati*, Ph. Lond. is made by dissolving 40 grains of tartarised antimony in two ounces of boiling water, and then adding eight ounces of white wine. Two drachms of this wine contain one grain of the antimonial salt. The *Vinum Tartritis Antimonii*, Ph. Ed. is made by dissolving 24 grains of tartrate of antimony in one pound of white wine. It is therefore only half as strong as the preparation of the London college, viz. two drachms of this wine contain only half a grain of the antimonial salt. In the *Vinum Tartari Stibiati*, Ph. Eblan. the proportion of the antimonial salt to water and wine is the same as in the formula of the Lond. college; consequently the doses are the same.

¶ The *Vinum Antimonii*, Ph. Lond. is a very uncertain preparation as to its strength, and is rendered superfluous by the vin. ant. tartar. It is made by digesting, for the space of 12 days, one ounce of vitrified antimony reduced to powder in a pint and a half of white wine. Three or four drachms generally operate as an emetic. The antimonial wines are generally employed in the doses of a few drops only, to promote perspiration (see DIAPHORETICS) rather than in quantities sufficient to produce full vomiting, which intention is better fulfilled by extemporaneous solutions of tartarised antimony (tartrate of antimony) in pure water.

CUPRUM *vitriolatum*, Ph. Lond. et Eblan. *Sulphas Cupri*, Ph. Ed. (*Vitriolum Cœruleum*). Vitriolated Copper. Sulphate of Copper. From 2 to 5 grains

produce full vomiting. It has been recommended by some practitioners as an emetic well suited to phthisical cases; but, as such, it seems to have no advantage over vitriolated zinc, which is a much safer preparation. For other remarks on this metallic salt, see TONICS.

ZINCUM vitriolatum, Ph. Lond. *Sulphas Zinci*, Ph. Ed. (see p. 166) Vitriolated Zinc, Sulphate of Zinc. (*Vitriolum Album*). From ten to twenty or thirty grains of this metallic salt, dissolved in water, operate speedily and powerfully as a vomit, and hence it is employed in cases where narcotic and other poisons have been swallowed. In smaller doses, such as five grains, it is an useful emetic (as it evacuates the stomach without weakening it) in epilepsy, hysteria, asthma, phthisis, and intermittent fevers.

E. CATHARTICS.

(1) *From the Animal Kingdom.*

FEL Bovis. Ox's Gall.

MEL. Honey.

(2) *From the Vegetable Kingdom.*

ALOE *perfoliata*. Aloes.

BRYONIA *alba*. White Bryony.

CASSIA *Fistula*. Purging Cassia.

———— *Senna*. Senna.

CONVOLVULUS *Jalapa*. Jalap.

———— *Scammonia*. Scammony.

CUCUMIS *Colocynthis*. Colocynth.

FICUS *Carica*. Fig.

FRAXINUS *Ornus*. Manna Ash.

¶ GRATIOLA *officinalis*. Hedge Hysop.

¶ HELLEBORUS *niger*. Black Hellebore.

¶ ————— *fætidus*. Stinking Hellebore.

LEONTODON *Taraxacum*. Dandelion.

¶ MOMORDICA *Eluterium*. Wild Cucumber.

NICOTIANA *Tabacum*. Tobacco.

PINUS *Larix*. Larchtree. Turpentine.

¶ RHAMNUS *catharticus*. Buckthorn.

RHEUM *palmatum*. Rhubarb.

RICINUS *communis*. Castor Oil.

SAMBUCUS *nigra*. Common Elder.

———— *Ebulus*. Dwarf Elder.

SPARTIUM *scoparium*. Broom.

STALAGMITIS *Cambogioides*. Gamboge.

TAMARINDUS *Indica*. Tamarind.

¶ VERATRUM *album*. White Hellebore.

TARTARI CRYSTALLI, Ph. Lond. (*Tartarum purificatum*)
Supertartris Potassæ, Ph. Ed. Crystals of Tartar. Super-
tartrite of Potass.

KALI *tartarisatum*, Ph. Lond. *Tartris Potassæ*, Ph. Ed.

Alkali Vegetabile tartarisatum, Ph. Eblan. Tartarised Kali.
Tartrite of Potass. Tartarised Vegetable Alkali.

KALI *vitriolatum*, Ph. Lond. *Sulphas Potassæ*, Ph. Ed.
Alkali Vegetabile Vitriolatum, Ph. Eblan. Vitriolated
Kali. Sulphate of Potass. Vitriolated Vegetable Alkali.

(3) *From the Mineral Kingdom.*

HYDRARGYRUS. Quicksilver.

MAGNESIA. Magnesia.

———— *vitriolata*, Ph. Lond. et Eblan. *Sulphas Mag-*
nesiæ, Ph. Ed. Vitriolated Magnesia. Sul-
phate of Magnesia.

NATRON *muriatum*, Ph. Lond. (Sal Muriaticus) *Murias Sodæ*.
Ph. Ed. *Sal Communis*, Ph. Eblan. Muriated Natron.
Muriate of Soda. Common Salt.

NATRON *vitriolatum*, Ph. Lond. *Sulphas Sodæ*, Ph. Ed. *Al-*
kali Fossile Vitriolatum, Ph. Eblan. Vitriolated Natron.
Sulphate of Soda. Vitriolated Fossil Alkali.

SAPO *hispanicus*. Spanish Soap.

SULPHUR. Brimstone.

Cathartics, or medicines which procure evacuations by stool, are of the most extensive use in the practice of physic. They are employed not only to cleanse the intestines, in various morbid conditions of these parts, and to remove obstruction and bring away worms, but they are also prescribed with the best effect in certain diseases of the head and eyes, such as vertigo, apoplexy, lethargy ophthalmia; in some convulsive disorders, such as hysteria and chorea; in cases of mesenteric disease; in cases of chlorosis and amenorrhœa; in jaundice and other affections of the liver; in bilious fevers (and especially in the ardent fever (yellow fever) of the hot climates); in some forms of typhus; and in some exanthemata, particularly the confluent small-pox and measles. They are moreover useful in the advanced stage of scarlatina; but in the early stage of that disorder, their administration is not so generally proper, as a late author on this subject has represented. *Hoffman* de Purgantibus. *Freind* de Purgatione in Comment. de Febris. *Linncæus* de Medicamentis Purgantibus apud Amœn. Acad. Vol. VIII. *Hamilton* on Purgative Medicines, 1806.

¶ Fel Bovis. Fel Tauri inspissatum. Ox's Gall. Of late years ox's gall, evaporated by a gentle heat to the consistence of honey, has been given on the Continent, in doses of ten or twenty grains, in cases of costiveness, jaundice, chlorosis, and worms. It is made into pills with soap, extracts of bitter vegetables, rhubarb, ammoniacum, steel-filings, and in worm cases with jalap. At the same time that it increases the alvine discharge, it is said to strengthen the stomach, to promote digestion, and

in every other respect to supply the deficiencies in the biliary secretion. In this account of its virtues there appears to be much exaggeration. That it proves laxative when swallowed in considerable quantity, cannot be doubted; but we suspect that much of its reputed efficacy in jaundice and obstructions of the liver, is to be ascribed to the extracts of bitter vegetables, to the deobstruent gums (such as ammoniacum, galbanum, &c.) and to the steel-filings, with which, in these cases, it has always been combined; and certainly as an anthelmintic, it would be of little avail without jalap or calomel. On the whole, as long as aloes can be procured, ox's gall may be dispensed with. *Hoffman* de Bile medicinâ et veneno, 1704. *Schulze* de Bile medicinâ, 1775.

MEL (see p. 45) Honey. When taken freely, operates, like unrefined sugar, by stool and urine; but it is of a heating quality, and is apt to gripe. It is seldom used as a laxative in any other way than in clysters; for which brown sugar answers quite as well.

The officinal preparations in which honey is an ingredient, are the *mel scillæ* and *oxymel scillæ* (see p. 160) the *mel rosæ* (see rosa) and the *mel acetatum* (formerly called *oxymel simplex*) which is made by boiling gently two parts honey with one part vinegar. Half an ounce of this, diluted with water, is aperient, diuretic and sudorific. It is a common addition to gargles.

(2) *From the Vegetable Kingdom.*

ALOE *perfoliata*. Hexandria Monogynia. Liliaceæ. Asia, Africa, America, West Indies. (Aloë barbadensis, hepatica, socotorina. Succus spissatus. Gummi-resina). Aloes. Barbadoes or Hepatic Aloes. Socotorine Aloes. The inspissated juice, a gum-resin. This is a very useful, warm, bitter cathartic, particularly suited to remove habitual costiveness from torpor or sluggishness of the intestinal canal, or from a deficiency in the biliary secretion. Hence it is prescribed with good effect in icteric, hypochondriacal, chlorotic, and cachectic cases; and it is frequently employed to bring away worms. Its emmenagogue powers will be noticed in another place. When taken freely, or for much length of time, it is apt to stimulate the intestines too much, and to bring on the piles. On account of its irritating quality, it is an improper purge in pulmonic and hæmorrhoidal cases, in plethoric constitutions, in the advanced stage of pregnancy, and during a flow of the menses. To adults, the dose is from five to twelve grains. It is generally made into pills with bitter extracts, soap, ammoniacum, guaiacum, and other gum-resinous substances. The officinal preparations of this drug are, the *Pulvis Aloës cum Canella*, Ph. Lon. (formerly called *Hiera Picra*) which consists of 12 parts aloes and 3 parts canella alba. Dose from 10 to 15 or 20 grains. The *Pulvis Scammonii compositus cum Aloë*, Ph. Lond. which consists of scammony 6 parts, extract of jalap 12 parts, aloes 12 parts, and ginger 4 parts. It is a very drastic purge. Suited to drop-

sical and worm-cases. Dose from 5 to 15 grains. The *Pulvis Aloes cum Guaiaco*, Ph. Lond. which consists of 3-6ths aloes, 2-6ths guaiacum, and 1-6th aromatic powder. Suited to rheumatic and gouty cases. Dose from 10 to 20 grains. This composition is intended as a substitute for the aromatic pills of the old pharmacopœias, as the *Pulvis Aloes cum Ferro*, Ph. Lond. (see EMMENAGOGUES) is for that of the ecphractic pills. The *Pilulæ Aloës compositæ*, Ph. Lond. which consist of aloes 1 ounce, extract of gentian $\frac{1}{2}$ ounce, oil of carraway-seed 2 scruples, beaten into a mass with syrup of ginger. Dose, from eight to fifteen or twenty grains. The *Pilulæ Aloës cum Myrrha*, Ph. Lond. (see EMMENAGOGUES). The *Pilulæ Aloeticæ*, Ph. Ed. consist of aloes and soap, equal parts. Dose, ten to thirty grains. The *Pilulæ Aloëtica*, Ph. Ebl. consist of aloes one ounce, extract of gentian $\frac{1}{2}$ ounce, ginger-powder 2 drachms beaten into a mass with soap-jelly. The *Pilulæ Aloës cum Colocynthide*, Ph. Ed. (formerly *Pilulæ Coccia*) consist of aloes 8 parts, scammony 8 parts, colocynth 4 parts, oil of cloves 1 part, sulphate of potass 1 part, beat into a mass with mucilage of gum arabic. A strong cathartic. Dose, from ten to twenty grains. The *Pilulæ Aloës et Myrrhæ*, Ph. Ed. (see EMMENAGOGUES). Aloes are also an ingredient in the *Extractum colocynthidis compositum*, Ph. Lond. (see article Colocynth). The *Vinum Aloës*, Ph. Lond. (formerly called *Tinctura sacra*) is made by digesting for 14 days eight ounces of aloes and two ounces of canella alba in six pints of white wine and two pints of proof spirit. Dose, from half an ounce to an ounce and a half. The *Vinum Aloës Socotorinæ*, Ph. Ed. is made by di-

gesting for seven days one ounce of aloes, one drachm of the lesser cardamom seed, and one drachm of ginger, in two pounds of white wine. It is a weaker preparation than that of the London college, and may be given in doses of one or two ounces. The *Vinum Aloeticum*, Ph. Eblan. is made by digesting for 14 days 4 ounces of aloes and 2 ounces of canella alba, in four pounds of white wine. The *Tinctura Aloës*, Ph. Lond. et Ebl. is made by digesting in a sand bath half an ounce of aloes and an ounce and a half of extract of liquorice, in eight ounces of water and eight ounces of proof spirit. Dose, from half an ounce to an ounce and a half. The *Tinctura Aloes Socotorinæ*, Ph. Ed. is made by digesting for 7 days $\frac{1}{2}$ ounce of aloes, and 1 and $\frac{1}{2}$ ounce of extract of liquorice, in four ounces of alcohol and one pound of water. The proportions in the Dublin pharmacopœia are the same. For the composition of the *Tinctura Aloes composita*, Ph. Lond. and *Tinctura Aloes et Myrrhæ*, Ph. Ed. see EMMENAGOGUES. Lastly, this drug is an ingredient in the *Tinctura Benzoes composita*, Ph. Lond. et Ed. (see p. 162).

BRYONIA alba. (B. *dioica* Jacquin). Diœcia Syngenesia. Cucurbitaceæ. Indigenous. (Radix). Bryony. The root of this plant is a strong cathartic, suited to dropsical and maniacal cases; in which it is given in doses of twenty or thirty grains. It may be advantageously prescribed in the form of an infusion, made by steeping half an ounce of the fresh root in a pint of water, to which may be added a couple of ounces of spirit of juniper, pep-

per-mint, or any other aromatic to prevent griping. Of such an infusion, a table spoonful may be given three or four times a day. It operates both by urine and stool. This plant has a place in the Dublin list of the materia medica, and was inserted in the former editions of the Edinburgh pharmacopœia. That it possesses considerable acrimony, or even some degree of virulence, can be no objection to its use, since the same may be said of many other drugs that are administered every day. In hospitals it would very well supply the place of jalap, and thus lead to considerable savings.

CASSIA *Fistula.* Decandria Monogynia. Lomentaceæ. Arbor. East and West Indies. Egypt. (Cassia fistularis. Fructûs pulpa). Cassia. Purg-ing Cassia. The pulp contained in the pods of this tree, operates gently by stool, when taken to the quantity of half an ounce or six drachms. Except in the cases of children and pregnant women, its laxative power is too feeble to be trusted to alone; hence it is usually conjoined with crystals of tartar, tartarised kali, or some other neutral salt. The *Electuarium Cassiæ*, Ph. Lond. et Eblan. consists of cassia-pulp six parts, manna two parts, tamarind-pulp one part, dissolved by boiling gently in rose-syrup six parts, and evaporating to the consistence of an electuary. Dose, half an ounce to an ounce. In the *Electuarium Cassiæ Fistulæ*, Ph. Ed. (formerly Diacassia) there is a trifling variation in the proportions of the tamarinds and manna. It may be given in the same doses. The other officinal preparation in which cassia-pulp is an ingredient, is

the *Electuarium Sennæ*, Ph. Lond. et Eblan. *Electuarium Cassiæ Sennæ*, Ph. Ed. the composition of which is mentioned in the following article.

CASSIA *Senna*. Class and Natural Order, the same as the last. Arabia. Egypt. Suffrutex. (*Senna*. *Folia*). *Senna*. The leaves of this shrubby plant are gently aperient. From half an ounce to six drachms of the leaves infused in six ounces of boiling water, will generally move the bowels sufficiently. This is the usual dose for adults. To prevent griping, it is proper to put into the infusion some carraway or other aromatic seeds; and to expedite its operation and improve its flavour, some saline matters, such as crystals of tartar, or lemon-juice, are often added to it. The simple infusion, without any other additament than some coriander or carraway-seeds, is a common laxative for children. The *Pulvis Sennæ compositus*, Ph. Lond. consists of senna and crystals of tartar, each two ounces, scammony half an ounce, ginger two drachms. Dose, half a drachm to a drachm. Suited to hydropic cases. The other officinal preparations, are the ¶ *Extractum Sennæ*, Ph. Lond. et Ed. a griping medicine, which is seldom used, and which may be regarded as superfluous. One or two scruples may be given for a dose; the *Electuarium Sennæ*, Ph. Lond. (formerly called *Electuarium Lenitivum*) which consists of senna-leaves eight ounces, figs one pound, pulp of tamarinds, cassia, and French prunes, each half a pound, coriander-seeds four ounces, liquorice root three ounces, fine sugar two pounds and a half. The senna-leaves and coriander-seeds are rubbed together, and ten ounces of

fine powder are sifted from them. The remainder is boiled along with the figs and liquorice root in four pints of water, to one half. The liquor is then filtered and evaporated to the weight of about a pound and a half, when the sugar is thrown in, so as to make a syrup, which is gradually added to the pulps; and, lastly, the senna and coriander-powder are mixed with the whole. This electuary is in frequent use as a laxative for children and pregnant women. To adults, the dose is from half an ounce to an ounce and a half. To children, 1 or 2 drachms. The number of ingredients might be reduced without impairing its qualities, by throwing out the pulp of cassia, and employing a double quantity of tamarinds in its place, and a larger quantity of prunes would render the figs superfluous. The liquorice is added to improve the flavour; yet it has that effect in so slight a degree that it might well be dispensed with. Thus simplified, the electuarium sennæ, would be a much neater, without being a less operative preparation. These hints, which were published ten years ago, have not been overlooked by the Dublin college, whose formula for the Elect. Sennæ is remarkably simple. The following are the ingredients: Senna leaves four ounces, pulp of prunes one pound, pulp of tamarinds two ounces, molasses 1 and $\frac{1}{4}$ pound, oil of carraway 2 drachms. In extemporaneous prescription, jalap, crystals of tartar, purified sulphur (*flores sulphuris*) &c. are occasionally added to it. In the *Electuarium Cassiæ Sennæ*, Ph. Ed. the cassia-pulp is omitted, and the quantity of pulp of prunes doubled. The proportions of the other ingredients are the same as in the formula of

the London college. The *Infusum Sennæ simplex*, Ph. Lond. is made by macerating for the space of an hour, one ounce and a half of senna and one drachm of ginger in a pint of boiling water. Dose, from one to three or four ounces. The ingredients and proportions are the same in the *Infusum Sennæ*, Ph. Eblan. The *Infusum Sennæ tartarisatum*, Ph. Lond. (formerly *Infusum Sennæ commune*) is made by macerating for one hour, one ounce and a half of senna and half an ounce of coriander-seeds in a pint of hot water, in which two drachms of crystals of tartar have been previously dissolved by boiling. Dose, from one to two ounces. In the Edinburgh pharmacopœia, there is no infusion of which senna is the basis; but it is an ingredient in the *Infusum Tamarindi cum Sennæ*, for the composition of which, see the article *Tamarindus*. The *Tinctura Sennæ*, Ph. Lond. et Eblan. is made by digesting for 14 days one pound of senna, one ounce and a half of carraway-seed, half an ounce of cardamom-seed, and 16 ounces of raisins (freed from the stones) in a gallon or 9lb. of proof spirit. Dose, from half an ounce to two ounces. *Tinctura Sennæ composita*, Ph. Ed. (formerly called *Elixir Salutis*) is made by digesting for seven days, two ounces of senna, one of jalap, and half an ounce of coriander-seeds, in three pints and a half of diluted alcohol. After straining off the tincture, four ounces of fine sugar are added to it. This is a more active preparation than that of the London college; but it is apt to gripe more. Dose, half an ounce to an ounce and a half. *Bouillon Lagrange sur le Séné* Annales de Chimie for October 1797.

CONVOLVULUS Jalapa. Pentandria Monogynia. Campanaceæ. Mexico. (*Jalapium. Jalapa. Radix*). Jalap. The root of this plant is a brisk and strong purge. It is especially suited to remove such obstructions of the intestinal canal as are occasioned by an accumulation of mucus, by torpor or in irritability, and by worms. Hence its use in the tumid and bound belly, to which children and young people are liable; in cachectic, leucophlegmatic, and hypochondriacal subjects; in dropsies; in mania; and in worm cases. The dose for children is from three to eight or ten grains; for adults, from ten to thirty grains. To prevent griping, it is usual to add a drop of some aromatic oil to each dose. In dropsical cases, crystals of tartar are often conjoined with it; and in febrile and worm cases, calomel. The *Pulvis Jalapæ compositus*, Ph. Ed. consists of jalap one part, supertartrate of potass (crystals of tartar) two parts. Dose, from half a drachm to a drachm. The *Extractum Jalapii*, Ph. Lond. et Ed. is prepared by first digesting one part of the powdered root in four parts of rectified spirit of wine (alcohol, Ph. Ed.) for the space of four days, and afterwards pouring off the tincture, and boiling down the résiduum in ten pints of water to two. (According to the directions of the Edinburgh college, the residuum, after making the tincture, is to be boiled for 15 minutes in five pounds of distilled water, and the decoction to be filtered boiling hot through linen. The boiling and filtration with the same quantity of water are to be repeated, and the liquor is then to be reduced by evaporation to the consistence of thin honey. The rest of the process is the same as that of the London college). The

strained decoction is then evaporated to the consistence of honey, and the spirit is abstracted from the tincture by distillation, till it is brought to the same consistence. Both products are then mixed together, and further evaporated to such a degree of inspissation, as is fit for making pills. This extract is given to children, triturated with a little sugar or almond-milk, in doses of from one to five grains; and to adults, in doses of five to ten or twelve grains; made into pills with soap or bitter extracts, and sometimes joined with calomel. This extract is an ingredient in the *Pulvis Scammonii compositus*, Ph. Lond. and *Pulvis Scammonii compositus cum Aloe*, Ph. Lond. for the composition of which see the following article. The *Tinctura Jalapii*, Ph. Lond. et Eblan. is made by digesting for eight days, eight ounces jalap in two pints proof spirit. Dose, two drachms to half an ounce. In the *Tinctura Convolvuli Jalapæ*, Ph. Ed. the proportions are three ounces of jalap to fifteen ounces of diluted alcohol. Dose, from three to six drachms. These tinctures are very drastic, irritating purges, and are seldom given alone. They are commonly added in small quantities, such as a drachm or two, to infusions of senna, solutions of neutral salts, and other cathartic potions: *Schaller de Jalapa*, 1761, reprinted in *Wittwer's Delectus Dissertationum Medicarum*.

CONVOLVULUS *Scammonia*. Class and Order, the same as the last. Aleppo. Smyrna, and other parts of the Levant. (Scammonium. Gummi-resina). Scammony. This gum resinous substance, which is the inspissated or concreted juice of the root of

the plant, operates quickly and strongly by stool, in doses of from five to fifteen grains. As it coincides in its cathartic powers with jalap, and the extract of jalap, it is suited to the same cases in which they are employed, viz. to obstructions of the intestinal canal from accumulation of mucus; to worm cases; and to dropsies. The *Electuarium Scammonii*, Ph. Lond. et Eblan. consists of scammony one ounce and a half, cloves and ginger, each, six drachms, oil of carraway half a drachm, rose-syrup enough to make an electuary. In the Dublin formula syrup of orange peel is used instead of syrup of roses. Dose, from fifteen grains to half a drachm. The *Pulvis Scammonii compositus*, Ph. Lond. consists of scammony and extract of jalap, each, two ounces, ginger half an ounce. Dose, from eight to 12 or 15 grains. Especially suited to hydropic and worm cases. The *Pulvis Scammonii compositus*, Ph. Ed. consists of scammony and supertartrite of potass (crystals of tartar) equal parts. It may be given in doses of from 10 to 20 or 30 grains. Like the other, it is an useful hydragogue purge. The *Pulvis Scammonii comp.* Ph. Eblan. consists of scammony and vitriolated vegetable alkali, each two ounces, ginger half an ounce. The *Pulvis Scammonii compositus cum Aloë*, Ph. Lond. consists of scammony six drachms, hard extract of jalap and aloes, each an ounce and a half, ginger half an ounce. Dose, from five to 10 or 12 grains. The *Pulvis Scammonii cum Calomelane*, Ph. Lond. consists of scammony half an ounce, calomel and fine sugar, each two drachms. Dose, from five to 15 grains. This is a good worm medicine. In doses of from three to eight or ten grains, it is a com-

mon and useful purge for children when the bowels are obstructed with slime. Scammony is also an ingredient in the *Extractum Colocynthis compositum*, Ph. Lond. which preparation will be noticed under the following article.

CUCUMIS *Colocynthis.* Monœcia Syngenesia. Cucurbitaceæ. Syria, and other parts of the Levant. (*Colocynthis.* Fructûs medulla). Bitter Apple. Bitter Cucumber. Coloquintida. Colocynth. The pulpy or fleshy part of the fruit, exsiccated. This cathartic is so drastic and irritating in its operation, that it is scarcely applicable to any other cases, besides melancholy, lethargy, some hydropic affections, and worms; and even in these cases, it is not fit to be given alone in full doses, but should only be employed conjunctively with other purgatives, in such quantities as are sufficient to quicken and increase their action. Violent gripings, bloody stools, inflammation of the intestines, and convulsions, have been the consequence of an unguarded use of this medicine. Doses from two to six grains. The ¶ *Extractum Colocynthis compositum*, Ph. Lond. is, as many think, a preparation that could well be spared, and might be much better supplied by extemporaneous combination. It consists of a spirituous extract of colocynth, aloes, and scammony, aromatised with cardamom seeds. It may be given, made into pills, in doses of from five to 15 grains.

FRAXINUS *Ornus.* Polygamia Diœcia. Ascyroideæ. Arbor. Calabria. Sicily, and the Southern

parts of Europe. (*Succus concretus, Manna dictus*). The Manna Ash. Manna, the concrete juice of the tree. Dr. *Cullen* has taken great pains to show, that there is little or no difference between manna and sugar. In their sensible and chemical qualities, both, he says, are alike; and he is at a loss to know in what respect the medicinal power of the one is different from the other. That manna possesses the common properties of sugar, is not to be doubted; but because it coincides in taste and for the most part in chemical analysis, are we therefore to infer, that its action upon the living body is precisely the same? The berry of the atropa belladonna contains a saccharine juice, yet it is a strong poison; and as for chemical analysis, how little that is to be relied upon, in relation to the medicinal properties of bodies, the experiments long since made by the French Academy, have abundantly shown. The truth is, that manna, though a saccharine substance, has a stronger effect upon the human body than sugar itself. Hence, in equal doses, it is more laxative; and hence too, it is apt to gripe more. It is given to children, dissolved in water (with the addition of peppermint, or some other aromatic, to prevent griping) in doses of two drachms or half an ounce; and to adults, in doses of one or two ounces. To the latter, however, it is seldom given by itself in full doses, but is generally added in quantities of half an ounce or six drachms to infusions of senna and tamarinds, or to solutions of neutral salts. It is sometimes prescribed in the form of an electuary. It is an ingredient in the *Electuarium Cassiæ*, Ph. Lond. et Ed.

Hoffman de Manna, ejusque præstantissimo in medicinâ usu. *Heister* de Manna, 1752. And *Neuman's* Chemistry.

¶ *GRATIOLA officinalis*. Diandria Monogynia. Personatæ. Austria. France. Italy. (Herba. Radix). Hedge Hyssop. Of late years this plant has been much cried up in Germany as an useful cathartic in dropsical and worm cases. That it is no inert thing, is proved by several cases upon record, in which it excited violent vomiting and purging; but whilst there are so many other articles in the list of the materia medica, that are equally as operative and rather more manageable than this, we think it may be well dispensed with. The powder of the dried herb is given in doses of from fifteen grains to half a drachm. The infusion is made with two drachms to half a pint of water. Of this, two or three table spoonfuls are given thrèe times a day. The root is stronger, and is accordingly given in smaller doses. *Lentin* de Gratiolæ usu in mania. Vide *Duncan's* Annals of Medicine, Tom. I.

¶ *HELLEBORUS niger*. Polyandria Polygynia. Multisiliquæ. Austria, Alps, Apennines and Pyrenees. (Melampodium. Radix). Black Hellebore. This is a celebrated purge in maniacal and dropsical cases; yet we much question whether, in such disorders, it possesses any advantage over jalap, scammony, colocynth; especially when the operation of these is quickened and supported by mercurials and antimonials; and, in respect to its emmenagogue powers, we are convinced that it is in no degree superior to aloes and savin. If to these

considerations, we add the virulent effects which black hellebore has sometimes produced, and the great uncertainty there is in procuring the genuine roots, we shall have sufficient reason for thinking this plant may be spared from the *materia medica*. The black hellebore root is very rarely prescribed in substance. The most usual form is that of a decoction, made with two drachms of the root to a pint of water. An ounce of this is given every four hours. The officinal preparations from it in our pharmacopœias, are the *Extractum Hellebori nigri*, Ph. Lond. et Eblan. (formerly called *Extractum Melampodii*) which is made by evaporating the decoction to a due consistence. Dose, from three to six or eight grains. This extract is the basis of *Bacher's* celebrated hydragogue pills, composed (according to the Geneva pharmacopœia) of extract of black hellebore, myrrh, and carduus benedictus, beaten up together in the proportion of thirty grains of the first two ingredients and five grains of the last, and made into pills weighing a single grain. Dose, 3, 4, or 6, three or four times a day. The *Tinctura Hellebori nigri*, Ph. Lond. (formerly called *Tinctura Melampodii*) is made by digesting four ounces of the root and two scruples of cochineal in two pints of proof spirit. Dose, one or two drachms. The Edinburgh tincture is made with two pounds and a half of spirit to four ounces of the root, and $\frac{1}{2}$ drachm of cochineal. Both the extract and tincture are chiefly used as emmenagogues. *Buchner* de *Ellebori nigri usu*, 1751. *Franz* *Virtus Hellebori nigri hydragoga*, 1787.

¶ *HELLEBORUS fetidus*. Class and Order as the

last. Indigenous. (*Helleboraster. Folia*). Bear's-foot. Stinking Hellebore. A decoction of the leaves is a strong, but not very safe purge. Its doses have not been ascertained with precision. *Bisset* recommends a syrup prepared from the expressed juice as a worm medicine for children. But after all, this root appears to be a superfluous article in the long list of cathartic drugs.

LEONTODON *Taraxacum. Leontodon officinalis.* Syngenesia Polygamia æqualis. Compositæ semiflosculosæ. Indigenous. (*Taraxacum. Dens Leonis. Radix. Herba*). Dandelion, This common plant is as much undervalued in this as it is over-rated in other countries. From our own experience we can assert, that it is no inefficacious deobstruent in jaundice, dropsy, and other cases of visceral obstruction. The foreign pharmacopœias have an *Extractum Taraxaci*, of which the doses are from 15 to 30 or 40 grains, and which has recently been recommended by *Dr. Pemberton* in his Treatise on the Diseases of the Abdominal Viscera; but the form which we prefer is that of a strong decoction, made in the proportion of two or three ounces of the fresh root to a pint of water. Two or three drachms of crystals of tartar or vitriolated kali make an useful addition to this decoction. Sound, full grown roots, should be chosen, they should be sliced thin, and should be boiled gently for the space of two or three hours, adding a fresh quantity of water as often as shall be necessary, so that there may be left a pint at the last. Whoever will be at the pains of making the decoction, or of directing it to be made, in this

manner, will find it to be in the cases above-mentioned, a very serviceable medicine. *Delius* de Taraxaco, 1754, and reprinted in *Baldinger's Sylloge*.

¶ *MOMORDICA Elaterium.* Monœcia Syngenesia. Cucurbitaceæ. Italy, Sicily, and Southern parts of Europe. (*Cucumis agrestis.* *Fructus recens*). Wild Cucumber. The fresh fruit of this plant is a violent and acrimonious cathartic. *Elaterium* is prepared from the feculent part of the expressed juice, dried with a gentle heat. In the days of *Sydenham*, it was in frequent use as a purge in dropsies; but on account of its irritating effects, and the hypercatharsis which it has sometimes induced, it is seldom prescribed in modern practice. Indeed, while there are so many other safer hydragogues, why should we resort to one from which mischief may arise? Dose, from one to three grains.

PINUS Larix. Monœcia Polyandria (Monadelphica Polyandria). Coniferæ. Arbor. Switzerland, Tyrol, Stiria, Bohemia, Siberia. (*Liquor resinosus e cortice inciso stillans, Terebinthina dictus.* *Terebinthina Veneta*). The Larch Tree. The resinous liquor, called *Turpentine*, that flows from the wounded bark. Venice Turpentine. This and the other turpentine, injected into the intestines, in the dose of half an ounce or six drachms, previously mixed by means of the yolk of an egg, with a sufficient quantity of water, seldom fail to produce copious evacuations by stool, in colic, and cases of obstinate costiveness. For other remarks on Turpentine, see *STIMULANTS*.

¶ *RHAMNUS catharticus.* Pentandria Monogynia. Dumosæ. Frutex. Indigenous. (*Spina cervina.* Baccæ). Buckthorn. From the expressed juice of the berries, boiled with a proper quantity of sugar, is prepared a syrup, which has a place in both the British pharmacopœias. To prevent its griping operation, the *Syrupus Spinae Cervinae* of the London college is aromatized with pimento and ginger. It was formerly much prescribed by *Sydenham*. The dose of this, as well as of the *Syrupus Rhamni Cathartici*, Ph. Ed. is from six drachms to an ounce or an ounce and a half. This is a nauseous cathartic, whose place may at all times be much better supplied by senna, jalap, and several other articles of this class.—A powder from the dried berries is recommended in dropsies and worm-cases by *Linnaeus* (de Purgantibus Indigenis apud Amœn. Acad. Vol. VII). Of this powder the dose is from 10 to 30 grains for children, and from one to two drachms to adults.

RHEUM palmatum. Enneandria Trigynia. Oleaceæ. Tartary, Thibet, and other parts of Asia. (*Rhabarbarum.* Radix). Rhubarb. The root of this plant is a well known laxative. It is given in substance, in doses of from ten grains to two scruples or more. To quicken its operation, and prevent its secondary astringent effect, it is usual to join with it calomel, crystals of tartar, vitriolated kali, or some other aperient. The officinal preparations of this drug, are the *Infusum Rhei Palmati*, Ph. Ed. which is made by macerating for 12 hours half an ounce of rhubarb in eight ounces of boiling water, and afterwards adding one ounce of spirit

of cinnamon, and straining off the liquor. From two to four ounces may be taken at a time. The *Vinum Rhabarbari*, Ph. Lond. (formerly called *Tinctura Rhabarbari vinosa*) is made by digesting for ten days two ounces and a half of rhubarb, half an ounce of the lesser cardamom seeds, and two drachms of saffron, in two pints of white wine and eight ounces of proof spirit. Dose, one or two ounces. The saffron contributes nothing to the efficacy of this composition, and therefore ought to be rejected. The *Vinum Rhei Palmati*, Ph. Ed. is a less compound and a stronger preparation, being made with two ounces of rhubarb, one drachm of canella alba, two ounces of diluted alcohol, and 15 ounces of white wine, steeped together for seven days. Dose, from half an ounce to an ounce. The *Tinctura Rhabarbari*, Ph. Lond. is made with two ounces of rhubarb, cardamom seeds and saffron each two drachms, digested for eight days in two pints of proof spirit. Here again, and in the next preparation, we have the useless and unpalatable ad-ditament, the saffron. Dose, from half an ounce to an ounce and a half. The *Tinct. Rhabarb.* Ph. Eblan. consists of the same ingredients in the same proportions, except that the quantity of spirit is two pounds, and the digestion is continued for seven days only. Dose, from half an ounce to an ounce. The *Tinctura Rhabarbari composita*, Ph. Lond. consists of rhubarb two ounces, liquorice-root half an ounce, ginger and saffron, each, two drachms, water one pint, proof spirit twelve ounces, digested together for fourteen days. The *Tinctura Rhei Palmati*, Ph. Ed. is made with rhubarb three ounces, lesser cardamom seeds half

an ounce, diluted alkohol two pounds and a half, digested for seven days. Dose, from half an ounce to an ounce. The *Tinctura Rhei et Gentianæ*, Ph. Ed. is made with rhubarb two ounces, gentian-root half an ounce, diluted alkohol two pounds and a half, digested for seven days. Dose, as a purge, half an ounce or six drachms; as a stomachic, two or three drachms. The *Tinctura Rhei et Aloes* Ph. Ed. (formerly called Elixir sacrum) is made by digesting together for seven days, rhubarb ten drachms, aloes six drachms, cardamom-seeds half an ounce, diluted alkohol two pounds and a half. Dose, as a purge, half an ounce or six drachms; as a stomachic one drachm. *Alpinus* de Rhapontico, 1718. *Gmelin* de Rhabarbaro, 1752. *Linnaeus* de Rhabarbaro, 1752; and in *Amœnitat. Academ.* Vol. III.

RICINUS communis. Monœcia Monodelphia. Tricoccæ. Arbor. West Indies. (Oleum seminis). Palma Christi. The oil called *Castor oil*, obtained from the seeds of this vegetable, either by expression or coction, is an excellent laxative in cases of obstinate constipation, colica saturnina, ileus, stone and gravel, piles, &c. It may be given, mixed up with water, by means of yolk of egg or gum arabic; or, what is much better, floating upon a glass of lemonade or peppermint water, or any other aromatic liquor. To these may sometimes be added a little tincture of rhubarb or senna. Dose, from half an ounce to an ounce. A large quantity is apt to provoke vomiting; hence it is best to give it in small doses, frequently repeated. It is so little irritating in its operation, that it may be given with great

safety and advantage to pregnant women and infants; to the last, in doses of one or two teaspoonfuls. Where it excites vomiting, or cannot on other accounts be given by the mouth, it may be administered with good effect clyster-wise. *Fischer de Ricino*, 1719. *Canvane* on the *Oleum Palmæ Christi*, or Castor Oil, 1769.

SAMBUCUS nigra. Pentandria Trigynia. *Dumosæ.* Arbor. Indigenous. (Cortex interior). Common Elder. The inner green bark is a strong cathartic. On the recommendation of *Boerhaave* and *Sydenham*, it is sometimes given in dropsies. The formula of the last-mentioned physician is by much too operative for the present race of English. If instead of three handfuls, one ounce of the bark is boiled in a quart of water down to a pint, the decoction will be as strong as most patients can bear. This may serve for four doses; and to make it more tolerable to the stomach and bowels, one or two ounces of spirit of cinnamon may be added to it.

SAMBUCUS Ebulus. Class and Order, as the last. Indigenous. (*Ebulus.* Cortex interior). Dwarf Elder. The inner bark of this plant, which is an herbaceous perennial, is a strong hydragogue purge, like the bark of the preceding species. Dr. *Brockelsby* (*Economical and Medical observations*, 1764) was witness to astonishing success in ascites from the fresh inner rind, boiled in water till it makes it exceedingly bitter, and taken upon an empty stomach in the morning, so as to vomit and purge downwards very powerfully. At the same

time it proved considerably diuretic. These advantages were derived from this decoction after several fruitless trials with various other cathartics. We are not told what was the proportion of the elder bark to the water; but, where vomiting is not required, half an ounce or six drachms boiled in a pint and a half of water down to twelve ounces, and divided into three equal doses, will be sufficiently operative for most patients.

SPARTIUM scoparium. Diadelphia Decandria. Papilionaceæ. Fruticulus. Indigenous. (Genista. Cacumina vel summitates). Broom. If an ounce of the green tops of this shrubby plant be boiled in a pint and a half of water down to a pint, and two ounces of this decoction be given three or four times a day, a copious evacuation by stool, as well as by urine, will generally follow. Hence this decoction is an useful cathartic in dropsies. The bark is more operative than the tops. The seeds in full doses are apt to vomit rather than to purge. As a hydragogue medicine, they are inferior to either the tops or the bark of the stem.

STALAGMITIS Cambogioides. Polygamia Monœcia. Tricoccæ. (Gambogia. Gumi-resina) Gamboge. This gum-resin is the juice that flows from the wounded bark of the tree, concreted by the combined action of the sun and air. It is a strong cathartic, which may be advantageously employed in hydropic and worm cases, in doses of from three to fifteen or twenty grains. It is generally made into pills with calomel, rhubarb, soap, bitter extracts, &c. *Cullen* used to direct it to be triturated

into a powder with sugar. *Werlhof* mixed it with water and a little sugar, adding some spirit of cinnamon, to render it palatable, and make it sit better upon the stomach. Others prescribe it in a liquid form, joined with alkaline or neutral salts. A foreign physician of eminence administers it in dropsies, in the following manner. Half a drachm of the gum-resin is dissolved, by trituration, in a strong lixivium of salt of tartar. After it has stood to settle, the liquor is poured off from the sediment; and of this, forty or fifty drops are, at first, given twice a day, in a cup of tea, coffee, or milk and water. After a few days, if the medicine ceases to operate sufficiently, the dose is increased to half as much more, or twice as much; and so on, according to its effects and the state of the patient. It operates both by stool and urine, and in this way many watery collections have been removed. These observations in favour of the hydragogue powers of gamboge, the experience we have had fully confirms. Our method of exhibiting it, however, is in the form of pills, in conjunction with squill and some of the warm gums. To promote the operation of these pills, we direct the patient to dilute with a solution of crystals of tartar, or some other saline or acidulated liquor.

TAMARINDUS *Indica*. Tetrandia Monogynia. Lomentaceæ. Arbor. East and West Indies, Egypt, and Arabia. (Fructus). The Tamarind. The pulpy fruit of this tree is a pleasant and useful laxative in dysentery and many febrile disorders, especially in such as are of a bilious and putrid nature. The dose of the pulp is from half an ounce to one

or two ounces. It is generally given in decoction or infusion, combined with crystals of tartar, vitriolated kali, or some other neutral salt, and sometimes with rhubarb and senna. The *Infusum Tamarindi cum Senna*, Ph. Ed. consists of tamarinds one ounce, senna one drachm, coriander-seed half a drachm, brown sugar half an ounce, macerated for four hours in eight ounces of boiling water. This may serve for two or three doses. *Tamarind-whey* (*serum lactis tamarindatum*) is a pleasant laxative, antiseptic drink, made by adding a couple of ounces of the fruit to a pint or a pint and a half of boiling milk, and afterwards continuing the boiling till the milk is curdled, and then straining off the whey through a linen or flannel bag. Of this whey a tea-cupful may be drunk at pleasure. The tamarind-pulp is an ingredient in the *Electuarium Cassiæ* and *Electuarium Sennæ* of the Lond. and Ed. pharmacopœias.

¶ *VERATRUM album.* (*Helleborus albus*). White Hellebore (see p. 122). The root and the extract prepared from it, evacuate upwards and downwards violently. Even in small doses, the veratrum album acts with so much virulence, that its internal exhibition cannot be too much discountenanced. For maniacal disorders, we have plenty of medicines that are sufficiently operative without being dangerous. The *Decoctum Hellebori albi*, Ph. Lond. is made by boiling one ounce of white hellebore root in two pints of water to one pint, and then adding to the cold and strained decoction two ounces of rectified spirit. It is used externally as a wash in tinea and other cutaneous diseases.

The *Tinct. Veratri albi*, Ph. Ed. is made by digesting for seven days eight ounces of white hellebore root in 2 and $\frac{1}{2}$ pounds of diluted alcohol. Deobstruent in doses of 15 or 20 drops. In maniacal cases one drachm as a purge. The *Unguentum Hellebori albi*, Ph. Lond. consists of white hellebore one ounce, hog's lard ointment four ounces, essence of lemon half a scruple. Used in the same cases as the decoction.

TO this division of Cathartics from the Vegetable Kingdom, belong the following Salts, which either consist entirely of a vegetable acid and the vegetable alkali, or have the vegetable alkali for one of their component parts.

Tartari crystalli, Ph. Lond. et Eblan. (*Tartarum purificatum*). *Supertartris Potassæ*, Ph. Ed. Crystals of Tartar. Purified Tartar. Supertartrite of Potass. (Cremor Tartari). This saline substance is deposited from wine upon the sides of the casks. The austere and acid wines yield the greatest quantity and the best. It is purified by repeated solution in boiling water, which is afterwards evaporated, that the salt may crystallize. These crystals of tartar consist of the vegetable alkali super-saturated with the tartaric acid; and therefore might, conformably to the new nomenclature of the London College, be properly enough denominated Kali super-tartarisatum, in contradistinction to the Soluble tartar or Kali tartarisatum.

Crystals of tartar are an excellent laxative in jaundice, dropsy, dysentery, and in bilious and other fevers. Dose, from two drachms to one ounce. They may be given in powder with rhubarb, jalap, or other cathartics; or made into an electuary with tamarinds and other pulpy substances; or in infusion and decoction, with the addition of some of the purging tinctures. In the last of these modes of exhibition, viz. in infusion or decoction, the crystals can only be given in small quantities, as they require so much water for their solution.

KALI *tartarisatum*, Ph. Lond. *Tartris Potassæ*, Ph. Ed. *Alkali Vegetabile tartarisatum*, Ph. Eblan. (Tartarum Solubile) Tartarized Kali. Tartrite of Potass. Tartarized Vegetable Alkali. Soluble Tartar. Consists of tartaric acid saturated with the vegetable alkali. This is a neutral salt; whereas in the purified tartar, or crystals of tartar, the acid predominates. Half an ounce proves gently laxative; but it is usually added in small doses, such as a couple of drachms to infusions of rhubarb and senna. It dissolves readily in water.

KALI *vitriolatum*, Ph. Lond. *Sulphas Potassæ*, Ph. Ed. *Alkali Vegetabile Vitriolatum*, Ph. Eblan. (Tartarum Vitriolatum) Vitriolated Kali. Sulphate of Potass. Vitriolated Vegetable Alkali. (Vitriolated Tartar) Compounded of the vegetable alkali and vitriolic acid (sulphuric acid) Deobstruent in doses of one or two drachms; cathartic in the quantity of three drachms or half an ounce. Joined with rhubarb, bitter extracts, bitter infusions, and aperient decoctions.

(3) *From the Mineral Kingdom.*

HYDRARGYRUS *purificatus*. Purified Quicksilver, (see p. 127). Formerly it was much the fashion to prescribe *draughts of pure quicksilver* in obstinate constipations of the bowels, and in cases of ileus. Eight, ten, or twelve ounces of the metallic fluid were swallowed at once; but the event of the cases, in which it has been given in this manner, throws out little encouragement for the adoption of this practice. Would there be more probability of success, if this mechanical remedy were employed in the early stage of these diseases? It is certain that it has seldom been used till things were in the last extremity.

Pilulæ Hydrargyri, Ph. Lond. Ed. et Eblan. Quicksilver Pills (see p. 127). Fifteen or twenty grains of these pills, repeated at intervals of three or four hours, according to the urgency of the symptoms, may be given to procure stools, in jaundice, and other hepatic diseases, dropsies, obstinate constipations, colica pictonum, and ileus.

Calomelas, Ph. Lond. *Submurias Hydrargyri*, Ph. Ed. *Hydrargyrum Muriatum Mite Sublimatum*, Ph. Eblan. Calomel. (see p. 136). From three to six or eight grains of this mercurial preparation, operate quickly and powerfully downwards, and may be given with great advantage in the same cases as the triturated quicksilver, and also against worms. Two or three grains make an excellent purge for children, whose bowels are hard and obstructed with

slime. It is joined with jalap, scammony, colocynth and other cathartics.

MAGNESIA *usta*, Ph. Lond. et Eblan. *Magnesia*, Ph. Ed. (*Magnesia pura*). Calcined Magnesia. This is the earthy basis of Epsom salt, obtained by adding prepared kali to the salt, dissolved in a large quantity of boiling water, then passing the liquor through a cloth strainer, and washing the white powder that remains upon till it is deprived of all saline taste; and lastly subjecting the powder to a red heat. By the action of the fire, the carbonic acid, which previously adhered to the magnesia is expelled from it, and it is left pure.

MAGNESIA *alba*, Ph. Lond. et Eblan. *Carbonas Magnesiae*, Ph. Ed. White Magnesia. Carbonate of Magnesia. This differs from the preceding in no other respect than in being combined with carbonic acid. The same process is followed for preparing it, except that it is not subjected to calcination. Both this and the other is used as a laxative for children in acidities of the primæ viæ, in doses of from twenty grains to 2 scruples. The carbonate is somewhat more laxative than the pure magnesia. This medicine is commonly prescribed too freely, and with too little discrimination to children. Since the general abuse of it, hard and slimy bellies have, we are persuaded, been more frequent. By officiously destroying all acidity in the primæ viæ of infants and young subjects, we impede digestion, check nutrition; and by diminishing the natural and proper sensibility of the intestinal canal, render it sluggish and inactive, and consequently liable to

obstructions. The epithet *alba* applied to the carbonate of magnesia is by no means distinctive, the magnesia usta being equally white. For other remarks on this article see ABSORBENTS. *Hoffman* Animadversiones et Experimenta circa Magnesiam albam; in his Observationes physico-chimicæ, 1736. *Black* de Humore acido à cibus orto et Magnesia alba, 1754. *Henry's* Experiments and Observations on Magnesia, &c. 1773.

MAGNESIA *vitriolata*, Ph. Lond. et Eblan. *Sulphas Magnesiae*, Ph. Ed. (Sal Catharticus amarus. Sal Ebsomensis). Vitriolated magnesia. Sulphate of Magnesia. Bitter purging salt. Epsom salt. Consists of magnesia and vitriolic acid (sulphuric acid). This is a nauseous, but mild and efficacious laxative, and is given in doses of half an ounce or an ounce in hypochondriacal cases, colica pictonum, ileus, &c. Small doses, such as a couple of drachms, frequently repeated, often succeed better in procuring stools in the last mentioned cases, than larger quantities, which are apt to be rejected by the stomach. The medicinal spring at Epsom owes its purgative virtue to this salt.

NATRON *muriatum* (Sal Muriaticus) Ph. Lond. *Murias Sodæ*, Ph. Ed. *Sal Communis*, Ph. Ebl. Muriated natron. Muriate of soda. Sea salt. Common salt. Consists of the mineral alkali and muriatic acid. Half an ounce dissolved in a pint of water, will, in most instances, purge smartly. Of late it has been praised as an excellent cathartic in worm cases. It is a common and useful addition to purg-

ing clysters. It is obvious that sea-water owes its laxative quality to this salt.

NATRON *tartarissatum*, Ph. Lond. *Tartris Potassæ et Sodæ*, Ph. Ed. *Sal Rupellensis*, Ph. Eblan. (Sal de Seignette). Tartarised Natron. Rochelle Salt: Seignette Salt. This is prepared by gradually adding to a solution of natron (carbonate of soda) in boiling water a sufficient quantity of crystals of tartar. This triple salt is given in doses of half an ounce to an ounce and a half. It is especially suited to jaundice, and cases of stone and gravel.

NATRON *vitriolatum*, Ph. Lond. *Sulphas Sodæ*, Ph. Ed. *Alkali Fossile Vitriolatum*, Ph. Eblan. (Sal Glauberi). Vitriolated Natron. Sulphate of Soda. Vitriolated Fossil Alkali. Glauber's salt. Consists of mineral alkali and vitriolic acid (sulphuric acid). A very common and useful purgative. Dose, from half an ounce to an ounce and a half. The Cheltenham water owes its laxative quality partly to this salt and partly to vitriolated magnesia.

SAPO ex Oleo olivæ et Natro confectus, Ph. Lond. Soap made of olive-oil and mineral alkali. (N. B. The Sapo alicantinus vel hispanicus (Spanish soap) consists of the same ingredients, but the sapo vulgaris (common soap) is made of vegetable alkali and fat or tallow. None but the former should be used for medicinal purposes). In doses of one

or two drachms, it is gently laxative, and is sometimes employed in cases of habitual costiveness, jaundice, &c. It is commonly made into pills with bitter extracts, ammoniacum, aloes, and the like. *Schulze de Saponis usu medico, 1746.*

Flores Sulphuris *loti*, Ph. Lond. *Sulphur Sublimatum lotum*, Ph. Ed. et Ebl. (Sulphur purificatum). Washed Flowers of Sulphur. Washed Sublimed Sulphur. This preparation is sublimed sulphur deprived of the acid adhering to it, by repeated ablution with hot water. Laxative in doses of one or two drachms. Often employed with good effect to procure stools in hæmorrhoidal affections. The *Trochisci Sulphuris*, Ph. Lond. consist of the flores sulphuris loti two parts, fine sugar four parts, made into a proper form with mucilage of quince seed.

¶ The *Sulphur præcipitatum*, Ph. Lond. (formerly called Lac sulphuris) is obtained by dissolving sulphurated kali in boiling water, and adding to the filtrated solution as much diluted vitriolic acid as is necessary for precipitating all the sulphur, which is afterwards washed repeatedly till it is deprived of all taste. In this process, the vitriolic acid seizes the alkali which rendered the sulphur soluble in the water, whereupon the latter falls down to the bottom in the form of a fine powder, which may be considered as pure sulphur, and con-

sequently similar in its qualities and operation to sulphur purified by sublimation, i. e. the flowers of sulphur. The Dublin College direct diluted nitrous acid to be employed for the precipitation of the sulphur in place of the vitriolic acid. For the other preparations of sulphur, with remarks thereon, see DIAPHORETICS.

F. DIURETICS.

(1) *From the Animal Kingdom.*

MELOE *vesicatorius* (Cantharis) Spanish Fly.

ONISCUS *Asellus* (Millepeda) Woodlouse.

(2) *From the Vegetable Kingdom.*

ALLIUM *Cepa*. Onion.

—— *Porrum*. Leek.

—— *sativum*. Garlick.

¶ ARCTIUM *Lappa*. Burdock.

ASARUM *Europæum*. Asarabacca.

¶ ASPARAGUS *officinalis*. Asparagus.

COLCHICUM *autumnale*. Meadow Saffron.

COPAIFERA *officinalis*. Balsam of Copaiva.

CYNARA *Scolymus*. Artichoke.

¶ DAUCUS *Carota*. Carrot.

DIGITALIS *purpurea*. Foxglove.

JUNIPERUS *communis*. Juniper.

NICOTIANA *Tabacum*. Tobacco.

PINUS *Larix* (Terebinthina). The Larch. (Turpentine).

—— *sylvestris*. (Pix liquida) Scotch Fir. (Tar).

—— *picea*. Strásburgh Turpentine.

PISTACIA *Terebinthus*. Chio Turpentine.

SCILLA *maritima*. Squill.

SMILAX *Sarsaparilla*. Sarsaparilla.

SOLANUM *Dulcamara*. Woody Nightshade.

SPARTUUM *Scoparium*. Broom.

STALAGMITIS *Cambogioides*. Gamboge.

¶ ULMUS *compestris*. Elm.

KALI *præparatum*, Ph. Lond. *Carbonas Potassæ*, Ph. Ed.
Alkali Vegetabile Mite, Ph. Eblan. Prepared Kali. Carbonate of

Potass. Mild Vegetable Alkali. *Aqua Super-Carbonatis Potassæ*, Ph. Ed. *Liquor Alkali Vegetabilis Mitissimi*, Ph. Eblan. Water of Supercarbonate of Potass. Water of Milder Vegetable Alkali.

KALI *acetatum*, Ph. Lond. *Acetis Potassæ*, Ph. Ed. *Alkali Vegetabile Acetatum*, Ph. Eblan. Acetated Kali. Acetite of Potass. Acetated Vegetable Alkali.

KALI *citratum*. (*Citras Potassæ impurus et dilutus*) Citrated Kali.

KALI *nitratum*, Ph. Lond. *Nitras Potassæ*, Ph. Ed. (Nitrum) Nitrated Kali. Nitrate of Potass. (Nitre).

Spiritus Ætheris Nitrosi, Ph. Lond. et Ed. *Liquor Æthereus Nitrosus*, Ph. Eblan. Spirit of Nitrous Ether. Nitrous Ethereal Liquor.

Tartari crystalli, Ph. Lond. et Eblan. (*Tartarum purificatum*) *Supertartris Potassæ*, Ph. Ed. Crystals of Tartar. Supertartrite of Potass.

(3) *From the Mineral Kingdom.*

AQUA. WATER. *Aqua Aëris Fixi*, Ph. Eblan. Water impregnated with Fixed Air (Carbonic Acid Gas). Carbonated Water.

MURIAS *Calcis*. Muriate of Lime.

NATRON *præparatum*, Ph. Lond. *Carbonas Sodæ*, Ph. Ed. *Alkali Fossile Mite*, Ph. Eblan. Prepared Natron. Carbonate of Soda. Mild Fossil Alkali. *Aqua Super-Carbonatis Sodæ*, Ph. Ed. Water of Super-carbonate of Soda.

NATRON *tartarisatum*, Ph. Lond. *Tartris Potassæ et Sodæ*, Ph. Ed. (*Sal Rupellensis*) Tartarized Natron. Tartrite of Potass and Soda.

Diuretics, or medicines which promote the secretion of urine, are much employed in hydropic and calculous affections, in gleans and fluor albus, and in some chronic diseases of the skin. They are also useful in bilious disorders. Different diuretics are suited to different kinds of disease. Thus (with the exception of some of the saline substances belonging to this sub-division of evacuating medicines) those which are suited to dropsy are not adapted to cases of calculus, nor are those which are proper in fluor albus proper in stone and gravel. Many of those diuretic medicines which act upon the absorbents, so as to remove watery collections from various cavities of the body, possess a peculiar acrimony, such are the squill and colchicum; and some of them are powerfully narcotic, such are tobacco and the foxglove. Again, those which are suited to fluor albus and gleans, are of a resinous nature, such as turpentine, and balsam of copaiva; while those which afford relief in calculous and bilious disorders, are either the so called neutral salts, or solutions of the fixed vegetable or mineral alkali. Where the last mentioned diuretics are given, it is proper to direct the patients to dilute plentifully with water.

(1) *From the Animal Kingdom.*

MELÖE *vesicatorius*. Linn. *Lytta vesicatoria* Fabricii. (Cantharis) Insecta Coleoptera. Spanish Fly. Of late years this insect has been given in dropsical cases, to promote the urinary secretion. *Werlhof's* method was to prescribe one grain of the powdered fly every fourth or sixth hour, directing

the patient to drink after it some mucilaginous liquor, such as almond-emulsion, gruel, or the like. This, however, is too large a dose to begin with. The safer way is to give only half a grain at a time, or, in irritable-subjects, not more than a quarter of a grain, which may be repeated four times in the course of the day. Others prefer the Tincture (see STIMULANTS), which may be given in doses of thirty or forty drops, in a solution of acetated kali, or any other saline vehicle. After all, this is a very uncertain diuretic, in the use of which many practitioners have been repeatedly disappointed. For an account of the different preparations of cantharides, and for other remarks on their medicinal uses, see STIMULANTS.

¶ ONISCUS *Asellus*. Millepeda. (see p. 148) Woodlouse. In the recent state these insects have been given in the quantity of a drachm or more, to promote urine, in hydropic cases. With the same intention the dried insects have been prescribed in doses of fifteen or twenty grains. But, while we are provided with so many other more powerful diuretics, the millepedes may well be dispensed with. *Cartheuser de Millepedis*, 1771.

(2) *From the Vegetable Kingdom.*

ALLIUM *Cepa*. Hexandria Monogynia. Liliaceæ. (*Cepa*. Radix). Onion. This and the roots of the

ALLIUM *Porrum*. Leek; and

ALLIUM sativum. Garlick; are frequently resorted to in dropsical cases, but rather as auxiliary than as principal agents. See p. 149.

¶ *ARCTIUM Lappa.* Syngenesia Polygamia æqualis. Compositæ capitatæ. Indigenous. (Barbana. Radix). Burdock. A decoction of the roots of this plant is diuretic, but in so slight a degree as scarcely to deserve notice. It is said to have been useful in cases of stone and gravel. If it is entitled to any place in the materia medica, it must be in the class of DEMULCENTS.

ASARUM Europæum. (See p. 120). Asarabacca. A decoction of the roots of this plant operates powerfully by urine, and has been employed with advantage in dropsies; as has been before mentioned at the page above referred to.

¶ *ASPARAGUS officinalis.* Hexandria Monogynia. Liliacæ. Indigenons. (Turiones et Radix). Asparagus. The shoots and root. The former, viz. the shoots have been already noticed among the alimentary substances. Of the latter, viz. the root, a strong decoction was formerly employed in dropsies; but in modern practice it is justly disregarded.

¶ *COLCHICUM autumnale.* (See p. 151). Meadow Saffron. Has been prescribed with some success in ascites and hydrothorax; but in these cases, as well as in cases of humoral asthma, we have found the Squill, or Foxglove, a better medi-

cine. The different preparations of the colchicum are noticed at the page above referred to.

COPAIFERA officinalis. (See p. 152). Balsam of Copaiva. What is said of Turpentine farther on, will apply here.

CYNARA Scolymus. Syngenesia Polygamia æqualis. Compositæ Capitatæ. Southern parts of France, Italy, Sicily. (*Cinara. Folia*). Artichoke. Of the dietetical use of the receptacle of the flowers of this plant, notice has been already taken in Part I. of this Synopsis. In this place it remains only to be mentioned, that the expressed juice of the leaves mixed with an equal quantity of Madeira or other cordial wine, has been given with good effect to dropsical patients. Of this mixture the dose is an ounce or an ounce and a half twice a day. *Murray*, Appar. Med. Vol. vi. But more active medicines of this order render the Artichoke superfluous.

¶ *DAUCUS Carota.* Pentandria Digynia. Umbellatæ. Indigenous. (*Daucus Sylvestris. Semina*). Carrot. A strong infusion of the seeds has been much recommended by several writers in cases of stone and gravel; but against these diseases it is fortunate for mankind that the materia medica affords more efficacious remedies.

DIGITALIS purpurea. Didynamia Angiospermia. Solanaceæ. Indigenous. Foxglove. This is a very powerful diuretic, but one which requires much caution and management, in those who prescribe

it. According to *Dr. Withering* it is a much more certain diuretic than any other in present use. The leaves are the most preferable part of the plant for medical purposes. They should be dried sufficiently to allow of being readily reduced to powder. In this state, they may be administered in two ways, viz. either made into pills with ammoniacum, soap, or aromatics, or infused in water. In the first of these forms, from one to three grains of the powder may be given to adults twice a day. In the reduced state in which physicians generally find dropsical patients, four grains a day are sufficient. In the other form of exhibition, a drachm of the dried leaves is infused for four hours in half a pint of boiling water, adding to the strained liquor an ounce of any spirituous water. One ounce of this infusion given twice a day, is a medium dose for an adult patient. If the patient be stronger than usual, or the symptoms very urgent, this dose may be given once in eight hours; and on the contrary in many instances half an ounce at a time will be quite sufficient. About thirty grains of the powder, or eight ounces of the infusion, may generally be taken before the nausea commences. When the *digitalis* is disposed to purge, opium may be joined with it advantageously; and when the bowels are too tardy, jalap may be given at the same time without interfering with its diuretic effects. As this medicine when given in very large and quickly repeated doses, produces violent and sometimes deleterious effects, the following general precept of *Dr. Withering* should be well attended to by all who prescribe it. Let the medicine be given in the doses, and at the intervals mentioned above; let it be con-

tinued until it either acts on the kidneys, the stomach, the pulse, or the bowels; and let it be stopped upon the first appearance of any one of these effects. Administered in this way, the digitalis has been eminently serviceable in various kinds of dropsies, in humoral asthmas, and in some instances of phthisis pulmonalis. (See NARCOTICS.)

A much more convenient and more manageable formula is the saturated tincture, as first employed and recommended by *Dr. Darwin*. He directs two ounces of the foxglove-leave's nicely dried and coarsely powdered to be put into a mixture of four ounces of rectified spirit of wine, and four ounces of water. The mixture is to stand by the fire-side twenty-four hours, and the bottle to be frequently shaken; after which the tincture must be poured from the sediment, or passed through filtering paper. As the size of a drop is greater or less according to the size of the rim of the phial from which it is dropped, a part of this saturated tincture is directed to be put into a two-ounce phial, for the purpose of ascertaining the size of the drop. Thirty drops of this tincture are added to an ounce of mint water for a draught. To be taken twice or thrice a day, till the anasarca of the limbs is reduced, or the difficulty of breathing in hydrothorax is removed, or till sickness is induced. And if these effects do not occur in two or three days, the dose must be gradually increased to forty or sixty drops, or further (*Zoonomia*, Vol. II. p. 718, 4to edition). The *Tinctura Digitalis Purpureæ*, Ph. Ed. is made by digesting for seven days one ounce of the dried leaves of foxglove in eight ounces of diluted

alkohol. Dose, the same as of the preceding. The quantity of thirty drops, as directed by *Dr. D.* is too much to begin with. A third part of that dose, namely ten drops, will be sufficient in most instances, gradually increasing the number of drops according to circumstances. When the digitalis is administered in dropsical cases, it is often useful to join with it small doses of calomel and squill, or solutions of acetated kali or crystals of tartar, sometimes one, sometimes the other according to circumstances. Nausea and purging are prevented during the administration of this remedy, by aromatics and small doses of opium. Respecting the use of the foxglove in hæmoptysis, phthisis and other pulmonary disorders, see NARCOTICS, where reference will be made to various authors who have written on this subject.

JUNIPERUS communis. Diœcia Monadelphia. Coniferæ. Frutex. Indigenous. (Baccæ). Juniper. The berries of this shrub are a popular diuretic in most parts of Europe. They may be given either in substance or infusion. In the first way, the dried berries may be triturated with a little white sugar, or some neutral salt, and given in doses of from a scruple to half a drachm, three or four times in the course of twenty-four hours; but when thus administered the medicine proves oppressive to some stomachs. Hence the infusion will generally be found the most convenient form. It should be made in the proportion of two or three ounces of the seeds, well bruised, to a pint of boiling water, and should be drunk freely. The *Spiritus Juniperi compositus*, Ph. Lond. et Ed. is made by distilling

the berries, along with some carraway and fennel seeds, with proof spirit. It is a warm aromatic; but in diuretic power it falls very short of the watery infusion. The other officinal preparation is the oil distilled from the berries, (*Oleum Juniperi*) which like other essential oils is given in doses of two or three drops. *Bang de Junipero*, 1708.

NICOTIANA *Tabacum*. (See p. 120 and 153). Tobacco. An infusion made by steeping the leaves in water, in the proportion of one ounce of the former to one pound of the latter, has been given by *Dr. Fowler* with some success in cases of dropsy and dysury, in doses of 60 or 80 drops to adults, twice a day. To a patient of ten or twelve years of age forty drops, and to one of five years twenty drops, are a sufficient dose. A tincture or wine may be made in the same proportions. In its operation, the infusion, or tincture, or wine of tobacco is a very unpleasant medicine, producing heat in the throat, giddiness, nausea (often vomiting) drowsiness, headach, &c. It is commonly laxative. As a hydragogue, we deem it inferior to the digitalis and squill, and accordingly are little disposed to recommend it in dropsies; but in cases of dysury, where its good effects seem to depend on its anodyne and antispasmodic properties, we readily acknowledge that it is an useful medicine. *Fowler's Medical Reports* of the effects of Tobacco, principally with regard to its diuretic quality in the cure of dropsies and dysuries, 1785.

PINUS *Larix*. (See p. 196). The Larch. *Turpentine* (terebinthina) the product of this and other

trees of the fir-tribe, stimulates the kidneys very powerfully. Hence it is prescribed in mucous obstructions of the urinary passage, in fluor albus and gleet. It may be given in doses of ten, twenty, or thirty drops, either made into pills with powdered liquorice root, or triturated with almonds and mucilage of gum arabic, so as to form an emulsion. The *Oleum Terebinthinæ*, Ph. Lond. (*Spiritus Terebinthinæ*) is obtained by distilling five pounds of turpentine with four pints of water. The process is the same in the Dublin pharmacopœia, four pounds of water being used instead of four pints, and two pounds of the oil being distilled off. Dose, fifteen or twenty drops. The *Oleum Terebinthinæ rectificatum*, Ph. Lond. *Ol. Volatile Pini purissimum*, Ph. Ed. is obtained by distilling one part of oil of turpentine with four parts water, the distillation being continued as long as any oil comes over. In the Dublin pharmacopœia, the proportions are oil of turpentine two pounds, water four pounds, and one pound and half of oil is distilled off. Dose, twenty or thirty drops. The *Resina flava* (Yellow Rosin) is the substance which remains after the distillation of the oil of turpentine from the common turpentine. Formerly it was employed internally in nephritic cases; but modern practice very properly restricts its use to outward applications. It is the basis of several ointments, and cerates and plasters. See STIMULANTS.

PINUS sylvestris. Class and order the same as the last. Arbor. Indigenous. Scotch Fir. *Pix liquida* (Tar) is obtained by distilling per descensum the wood of this and other species of fir. The

Infusum Picis (Aqua Picea. Tar-Water) is made by steeping tar in water for a day or two. The common proportions are two pounds of tar to a gallon of water ; but a more saturated infusion is required in most cases. It will therefore be better to use the tar in double proportion, viz. four pounds to a gallon of water. Of this a quarter of a pint, or at most half a pint may be taken twice in twelve hours. The usual swilling mode of exhibiting it is intolerable to most patients. When its operation is assisted by bodily exercise, it promotes the urinary discharge, and is serviceable in cachectic and scorbutic cases; but the good Bishop of Cloyne has been too enthusiastic in his praises of it. He must have had little experience in the practice of physic, who shall expect half the benefit from it in one half of the disorders in which this prelate has recommended it. *Berkley's Siris*, 1744.

PINUS Picea. Class and Order as above. *Strasburgh Turpentine.* . Used in the same cases, and in the same doses as the resinous juice of the preceding species.

PISTACIA Terebinthus. *Diœcia Pentandria.* *Amentaceæ.* *Arbor.* Asia and Africa (*Terebinthina Chia*). *Chio Turpentine.* Dose and uses the same as those of the common turpentine before noticed.

SCILLA maritima. (See p. 155—161). *Squill.* At the pages above referred to, we have treated so fully of this drug and its preparations that we have little further to remark upon it. The *Tinctura Scillæ*, *Ph. Lond.* (see p. 161) is a very convenient

and active diuretic, far preferable in dropsies to the more nauseous, but more generally used medicine, the oxymel scillæ. It may be added to saline and aromatic vehicles in doses of twenty, forty, or fifty drops.—In dropsical cases, mercurials are advantageously joined with squill.

SINAPIS nigra. (See p. 100). Mustard. A table spoonful of the unbruised seeds, given night and morning, sometimes promotes in no inconsiderable degree, the urinary secretion in dropsies. The *Serum Lactis Sinapinum* (Mustard-Whey) of the foreign pharmacopœias (which is made by boiling two table spoonfuls of the bruised seed in a pint of milk, and afterwards separating the curds) is useful in the same cases. A quarter of a pint may be drunk twice or thrice a day. For more on this subject see STIMULANTS.

SMILAX Sarsaparilla. Diœcia Hexandria. Sarmenaceæ. Frutex. Mexico. Brazil. Peru. (Sarsaparilla. Radix). A strong decoction of this root operates freely by urine. It is frequently prescribed in cutaneous diseases, and in scrophulous, cancerous, and venereal cases. The *Decoctum Sarsaparillæ*, Ph. Lond. Ed. et Eblan. is made by boiling six ounces of the sliced root in eight pints of water (in which it has been previously macerated for four hours) till half the water is evaporated. Of this decoction four or six ounces may be given two or three times a day. The *Decoctum Sarsaparillæ compositum*, Ph. Lond. et Eblan. consists of sarsaparilla six ounces, sassafras, guaiacum shavings, liquorice root, each, one ounce, mezereon three

drachms, water ten pints. The sarsaparilla is macerated with a gentle heat for six hours, and then is boiled with the water till half the quantity is evaporated. The mezeon is added towards the end of the boiling. Dose, from four to eight ounces three or four times a day. In the same cases as the last, and especially in the venereal disease, in conjunction with mercury. It stands in place of the *Decoctum Lignorum* (Decoction of the Woods) of the former pharmacopœias, and is an imitation of the celebrated *Lisbon Diet-drink* (*Decoctum Lusitanicum vel Ulyssoponense*) of which Dr. *Donald Monro* has published an account in the 3d Vol. of the *Edinburgh Medical and Literary Essays*. For further remarks on this root, see *Fordyce's* paper in the *London Medical Observations and Inquiries*, Vol. 1. 1757. *Bromfield* on the English nightshades: Also practical Observations on Corrosive Sublimate and Sarsaparilla, 1757. *Brisbane's* Select Cases, 1772. Some have asserted that there are several indigenous vegetables, such as the burdock, elm, and some species of carex, which would answer all the purposes of sarsaparilla. This is a matter well worth attending to in hospitals, the sarsaparilla being sometimes a very expensive article. This drug is commonly ranked among the diaphoretics; but unless the patients are kept warm in bed, it operates chiefly by the kidneys.

SOLANUM Dulcamara. Pentandria Monogynia. Solanaceæ. Indigenous. (*Dulcamara. Stipites*). Bitter Sweet. Woody Nightshade. An infusion or decoction of the stalks and twigs, is a powerful diuretic, which has been given with good effect

in cases of humoral asthma and dropsy. It is also serviceable in rheumatic affections, and in diseases of the skin. As it is an active medicine, it is proper to begin with small doses, and to increase them gradually. Two drachms of the fresh stalks, chopped small, may be infused in eight ounces of boiling water. Of this infusion, one or two ounces may be given twice or thrice in twelve hours. An infusion is a more certain preparation than a decoction, since by long boiling the active particles of the plant are mostly dissipated. Hence the dried are less operative than the fresh twigs. (*Thesaurus Med.* p. 90). The extract recommended by the author of the Essay quoted below is a bad preparation. British practitioners are too neglectful of this vegetable. *Linnaeus* de *Dulcamara*, 1771, and in the *Amœnitat. Academ.* Vol. viii. *Razoux* sur la Douce Amere in the *Memoires de l'Academie des Sciences de Paris*, 1761. *Carrere* Memoire sur la Douce-amere, 1780. *Bertrand de la Gresie* Essai sur les dartres, avec des observations qui demonstrent l'efficacite de l'extrait de Douce-amere, &c. 1784.

SPARTIUM *Scoparium.* (Genista). Broom. See CATHARTICS, p. 201.

STALAGMITIS *Cambogioides.* (see p. 201). Gamboge. For remarks on the diuretic powers of this gum-resin, see the page above referred to.

¶ ULMUS *campestris.* Pentandria Digynia. Scabridæ. Arbor. Indigenous. (Cortex interior). The Elm. In lepra and other cutaneous diseases,

a strong decoction of the inner bark has been given by several practitioners with some success. It operates chiefly by urine. It is said to be serviceable in incipient dropsies, but for the generality of such cases it does not possess sufficient activity. Even in diseases of the skin, we are induced to consider it as inferior to sarsaparilla, guaiacum-shavings, and mezereon. The *Decoctum Ulmi*, Ph. L. is made by boiling four ounces of the inner bark in four pints of water down to two pints. Dose, from a quarter to half a pint twice or thrice a day. *Lysons*, in the Transactions of the London College, Vol. II. *Lettson*, Medical Memoirs. *Banau*, Journal de Paris, 1783.

To this division belong the following saline substances, which are either wholly, or in part, of vegetable origin.

KALI præparatum, Ph. Lond. *Carbonas Potassæ Purissimus*, Ph. Ed. *Alkali Vegetabile Mite*, Ph. Eblan. (Sal Tartari). Prepared Kali. Very Pure Carbonate of Potass. Mild Vegetable Alkali. (Salt of Tartar). Prepared according to the London and Dublin pharmacopœias, by dissolving potashes or pearl ashes (*Cineres clavellati*) in water, evaporating to a pellicle, filtrating and crystallizing; then pouring off the supernatant liquor, and evaporating to dryness. Thus the alkali is freed from the neutral salts and other impurities that were mixed with it before: Or, according to the directions of the Edinburgh College, it is obtained from tartar

(impure supertartrate of potass) by burning that salt in a red heat, dissolving the residuum in water, and filtrating and evaporating to dryness. The carbonated or mild vegetable alkali (prepared kali) operates by urine in doses of from five to fifteen grains, and is employed with advantage in intermittent fevers, in dropsies, and in cases of stone and gravel. In the first mentioned disorders, it is generally given in combination with aromatics and bitters. In the last mentioned cases, the best mode of administering it, is to dissolve it in water, to be afterwards impregnated with carbonic acid gas, as in the instance of the *Aqua Super-carbonatis Potassæ*. Ph. Ed. and *Liquor Alkali Vegetabilis Mitissimi*, Ph. Eblan. (formerly termed *Aqua Mephitica Alkalina*). Dose, a quarter of a pint twice a day. *Falconer's Account of the Efficacy of the Aqua Mephitica Alkalina in Calculous Disorders.*

KALI *acetatum*, Ph. L. *Acetis Potassæ*, Ph. Ed. *Alkali Vegetabile Acetatum* (Sal Diureticus). Acetated Kali. Acetite of Potass. Acetated Vegetable Alkali. (Diuretic Salt). A neutral salt, compounded of the vegetable alkali and acetous acid or vinegar. Operates readily by urine, and is frequently given in fevers, dropsies, jaundice, and various visceral and glandular diseases. Dose, from fifteen grains to a drachm, or a drachm and a half.

KALI *citratum*. (Citræ Potassæ impurus et dilutus). Citrated Kali. Consists of prepared kali or carbonate of potass, saturated with the acid juice of the lemon (*Citrus medica*). This is the basis of the saline

mixtures and effervescing draughts of the shops. (*Thesaurus Med.* p. 80, 136). About six drachms of the juice are requisite for the saturation of half a drachm of the prepared kali. Such a quantity, duly diluted with some aromatic water, may be given for a dose, in the same cases as the acetated kali.

KALI *nitratum*, Ph. Lond. Nitras Potassæ, Ph. Ed. (Nitrum). A neutral salt, compounded of the vegetable alkali and nitrous acid. In moderate doses (viz. from five to fifteen grains) nitre operates by urine and perspiration; in larger doses (such as half a drachm or two scruples) by stool. It is given with great advantage, dissolved in pure water or in mucilaginous vehicles, such as decoction of barley or almond-milk, in fevers, dropsies, and cutaneous diseases. *Thesaurus Med.* p. 74—77—86. For more on this article, see REFRIGERANTS.

Spiritus Ætheris nitrosi, Ph. Lond. et Ed. *Liquor Æthereus Nitrosus*, Ph. Eblan. Spirit of Nitrous Ether. Nitrous Ethereal Liquor. (*Spiritus Nitri dulcis*). Made by mixing together, and then distilling nitrous acid and rectified spirit of wine (alcohol). In the London pharmacopœia the proportions are, nitrous acid $\frac{1}{2}$ lb. rectified spirit 2 pints. In the Edinburgh and Dublin pharmacopœias, the proportions are, nitrous acid 1 lb. alcohol 3 lbs. The directions of the Edinburgh college, and *Dr. Duncan's* remarks in his *New Disp.*, relative to this preparation, are particularly worthy of notice.

TARTARI *Crystalli*, Ph. Lond. et Ed. (*Tartarum purificatum*). *Supertartris Potassæ*, Ph. Ed. Crystals of Tartar. Supertartrite of Potass. (See page 204). This salt has been given with great success to promote a flow of urine in dropsies. Three or four drachms of the crystals dissolved in about a pint of water, may be taken, at two or three draughts, every morning, till the disease is removed. This quantity may be increased in some cases, care being taken, however, that it do not operate too freely by stool. (*Thesaurus Med.* p. 84). In our own practice, we have sometimes prescribed the crystals of tartar triturated to a powder with dried squill, directing the patient to drink about an hour after taking it, some cheese-whey, or juniper tea. In this manner we have given this salt with the best effect in cases of ascites and anasarca. It has this great advantage over most other diuretics, that it does not (unless it is administered too profusely) leave the body weaker after its operation. Hence we have never found it necessary to give, agreeably to Dr. Home's suggestions, the bark or other tonics after it. *Home's Clinical Experiments* (second edition) 1782. *Ferriar's Medical Histories*, Vol. I. and II. 1794, 1795.

(3) *From the Mineral Kingdom.*

AQUA. *Water.* See DILUENTS.

Aqua Aeris Fixi, Ph. Eblan. Water impregnated with Fixed Air or Carbonic Acid Gas. This

is still more diuretic than simple water. It may be taken in nearly the same quantities.

MURIAS *Calcis*. Calx Muriata. Muriate of Lime. (Calx Salita). This salt has been exhibited with good effect in scrophulous cases by *Dr. Beddoes* (on Consumption, Digitalis and Scrophula). *Dr. Wood* (Ed. Med. Journal, Vol. I. No. 2.) and *Dr. Rd. Pearson* (Lond. Med. Rev. Vol. III. and Ed. Med. Journal, Vol. I. No. 4). There are two modes of administering this remedy; viz. either by directly saturating a given quantity of carbonate of lime with diluted muriatic acid, evaporating the solution to dryness, dissolving the residuum in its weight and a half of water and filtrating; this is the *Solutio Muriatis Calcis*, Ph. Ed. Dose, to children 30 drops; to adults 60 or 80 twice or thrice a day: Or, the thoroughly exsiccated salt may be preserved in bottles with ground stopples tied over with bladder, and be weighed out quickly (before it has time to deliquesce) in doses of three to five grains to children, and 15 or 20 to adults, twice a day, dissolved in gruel or sugar and water. It operates chiefly by urine. If it purges the dose should be diminished. See also *Schraud's* observations on the antiscrophulous powers of the muriate of lime (calx salita) in his treatise de Febris, published at Vienna, 1797.

I have prescribed the crystallized muriate of lime as prepared by some of the chemists in London, but not with the same success as the exsiccated salt.

NATRON, Ph. Lond. *Soda*, Ph. Ed. *Alkali fossile*, Ph. Ebl. Fossil or mineral alkali. This is the basis of sea-salt, from which it may be separated by various chemical processes. But for medical purposes it is best obtained from the ashes of the *Kali spinosum*, called *Barilla*. All that is necessary, is to dissolve the ashes in boiling water, filter and crystallize. This is the *Natron præparatum*, Ph. Lond. *Carbonas Sodæ*, Ph. Ed. *Alkali Fossile Mite*, Ph. Eblan. It is a valuable medicine in stone and gravel. Dose, ten or fifteen grains twice or thrice in a day. *Theden*, in his *Instructions to young Surgeons*, published at Berlin in 1774, directs a solution of the salt in lime-water, to be drunk every morning for a fortnight. This may be considered as a solution in pure water, as the carbonic acid of the natron throws down all the lime from the lime-water. This he found to be surprisingly efficacious in expelling calculous concretions. *Gmelin Apparatus Med.* Vol. I. 1795. But the most convenient mode of exhibition seems to be that recommended by *Dr. Beddoes*, viz. the exsiccated crystals are made into pills with soap or any other suitable medium (*Thesaurus Med.* p. 75). During the use of these pills, the patient should dilute with gruel, juniper-berry tea, or the like. *Beddoes* on the Nature and Cure of Calculus, &c. 1793. The *Aqua Super-Carbonatis Sodæ*, Ph. Ed. is prepared in the same manner, and is given in the same cases and in the same doses as the aqua supercarbonatis potassæ before mentioned. It is commonly known by the name of soda-water or acidulous soda-water,

NATRON *tartarisatum*, Ph. Lond. *Tartris Potassæ et Soda*, Ph. Ed. *Sal Rupellensis*, Ph. Eblan (see p. 209). Tartarised natron. Tartrite of Potass and Soda. Rochelle Salt. In doses of a drachm or two this is an useful diuretic in calculous cases. Of its use as a laxative, notice has been already taken at the page above referred to.

G. DIAPHORETICS.

(1) *From the Animal Kingdom.*

AMMONIA ejusque præparata. Volatile Alkali and its preparations.

MEL acetatum. Acetated Honey. Oxymel.

SERUM LACTIS Vinosum. Wine Whey.

(2) *From the Vegetable Kingdom.*

ACONITUM Napellus. Aconite.

ARISTOLOCHIA Serpentaria. Virginia Snake Root.

ASTRAGALUS exscapus. Stemless Milk Vetch.

CALLICOCCA Ipecacuanha. Ipecacuanha.

DORSTENIA Contrayerva. Contrayerva.

GUAIACUM officinale. Guaiacum.

LAURUS Camphora. Camphor.

————— Sassafras. Sassafras.

POLYGALA Senega. Rattle-Snake Root.

RHODODENDRON Chrysanthum. Rhododendron.

SAMBUCUS nigra. Elder.

SOLANUM Dulcamara. Woody Night-shade.

KALI nitratum. Ph. Lond. Nitras Potassæ, Ph. Ed. (Nitrum). Nitrated Kali. Nitrate of Potass. Nitre. Sp. ætheris nitrosi. Liquor Æthereus Nitrosus, Ph. Ebl.

(3) *From the Mineral Kingdom.*

AQUA tepida. Warm Water.

ANTIMONIUM ejusque præparata. Antimony and its preparations.

SULPHUR ejusque præparata. Sulphur and its preparations.

Spiritus Ætheris Vitriolici, Ph. Lond. Æther Sulphuricus cum Alcohole, Ph. Ed. Liqueur Æthereus Vitriolicus, Ph. Eblan. Spirit of Vitriolic Ether. Sulphuric Ether with Alcohol. Vitriolic Ethereal Liqueur.

Medicines, which promote perspiration, and which are termed diaphoretics and sudorifics, may be divided, 1st. into such as operate by diminishing arterial action when excessive, so as to moderate the calorific process; in other words to reduce the animal heat when morbidly accumulated, and thereby to remove its accompaniment aridity (or a non-exhalating condition) of the skin: And 2dly, into such as give energy to the vascular action when deficient, so as to produce a free distribution of the blood and other fluids through all parts of the system, and thereby to communicate a due degree of warmth to the surface of the body, of which the temperature was previously below the standard of health. Hence, in the administration of medicines belonging to this section, it is important to consider, whether the degree of bodily temperature be excessive or deficient, as different sudorifics are suited to these opposite states; and those which are salutary in the one, are hurtful in the other.

To the first kind, or those substances which promote exhalation from the skin by reducing the animal heat, belong antimonials and nitre, which are prescribed in inflammatory disorders, bloodletting and other evacuations being premised. Of the second kind or those things which produce a diaphoretic effect by augmenting the temperature of the surface, are wine-whey, volatile alkali, guaiacum, contrayerva, hot bath, flannel clothing, friction. These last are adapted to cases of chronic rheumatism and gout; to the cold fit of intermittents, and to typhus fever in its advanced stage. See STIMULANTS.

(1) *From the Animal Kingdom.*

AMMONIA *præparata*, Ph. Lond. *Carbonas Ammonia*, Ph. Ed. *Alkali Volatile Mite*, Ph. Eblan. Prepared ammonia. Carbonate of Ammonia. Mild Volatile Alkali. Obtained either by distilling the bones and horns of animals (see *Sal Cornu Cervi*) or by mixing together one part sal ammoniac (muriate of ammonia) with two parts of chalk (carbonate of lime) and subjecting the mixture to sublimation. In this process the sal ammoniac (muriate of ammonia) is decomposed, the muriatic acid combining with the chalk (carbonate of lime) and the ammonia or volatile alkali being set at liberty, and passing into the receiver in a mild or carbonated state. The only difference between the ammonia from bones (*sal cornu cervi*) and the ammonia from sal ammoniac is, that the former contains a proportion of empyreumatic oil, whereas the latter contains none. The latter is therefore the purer volatile alkali of the two. As the alkaline basis of the sal ammoniac may generally be traced to an animal origin, it belongs properly to this division, though the sal ammoniac itself is ranked among the products of the mineral kingdom. Dose, from five to fifteen grains. The *Aqua Ammonia*, Ph. Lond. is prepared by subjecting to distillation a mixture of one pound sal ammoniac, one pound and a half potashes, and four pints water. Two pints of liquid are distilled off. In this process the sal ammoniac (muriate of ammonia) is decomposed, the muriatic acid uniting with the potashes (carbonate of potass) and leaving the ammo-

nia dissolved in the water (in a mild or carbonated state) with which (viz. the water) it rises into the receiver. The *Aqua Carbonatis Ammoniae*, Ph. Ed. and *Liquor Alkali Volatilis*, Ph. Eblan. are prepared from the same ingredients, but in different proportions. Dose, from 30 to 80 drops. In the same doses may be given the *Liquor Volatilis Cornu Cervi*, Ph. Lond. (formerly called *Spiritus Cornu Cervi*) and which is obtained by distilling hartshorn and the bones of other animals. It differs from the aqua ammoniae in containing an admixture of empyreumatic oil. The *Spiritus Ammoniae*, Ph. Lond. *Spiritus Alkali Volatilis*, Ph. Eblan. is prepared by subjecting to distillation a mixture of proof spirit three pints, sal ammoniac four ounces, potashes six ounces. One pint and a half of alkaline spirit is distilled off. The *Alkohol Ammoniatum*, Ph. Ed. is prepared by subjecting to distillation a mixture of alcohol thirty-two ounces, quicklime twelve ounces, muriate of ammonia eight ounces, water eight ounces. The manner in which the ammonia is disengaged in these chemical processes, will easily be understood from the remarks relative to this subject under the article *Aqua Ammoniae*. Dose, from 15 to 60 drops. For an account of the *Spiritus Ammoniae compositus*, Ph. Lond. *Alkohol Ammoniatum Aromaticum*, Ph. Ed. *Spiritus Alkali Volatilis Aromaticus*, Ph. Eblan. and of the *Spiritus Ammoniae Succinatus*, Ph. Lond. and of the *Spiritus Ammoniae Foetidus*, Ph. Lond. *Alkohol Ammoniatum Foetidum*, Ph. Ed. *Spiritus Alkali Volatilis Foetidus*, Ph. Eblan. see STIMULANTS.

Aqua Ammoniae acetata, Ph. Lond. *Aqua Aceti-*

tis Ammonia, Ph. Ed. *Liquor Alkali Volatilis Acetati*, Ph. Eblan. (*Spiritus Mindereri*). Water of Acetated Ammonia. Water of Acetite of Ammonia. Liquor of Acetated Volatile Alkali. This is made by saturating ammonia (carbonate of ammonia) with distilled vinegar. It is frequently employed as a sudorific in rheumatic fevers, catarrhal affections, &c. Camphor, in some cases, and antimonials in others, are advantageously joined with it. Dose, from two drachms to half an ounce.

MEL acetatum, Ph. Lond. *Oxymel simplex*, Ph. Eblan. Acetated honey. Simple oxymel. Made by boiling two parts clarified honey with one part distilled vinegar. It is an useful sudorific in fevers and peripneumonic cases. Dose, half an ounce diluted with thin gruel and a little mint-water.

SERUM LACTIS vinosum. Wine Whey. Made by adding to a pint of milk boiled with half a pint of water, about a quarter of a pint of Rhenish, Madeira, or other white wine. The boiling is continued for about a minute after the addition of the wine. When made with equal parts of milk and water, less wine will suffice. The whey, strained from the curds, may be drunk by cupfuls, in febrile disorders.

(2) *From the Vegetable Kingdom.*

ACONITUM Napellus (*Aconitum Neomontanum*). Aconite or Monkshood. See NARCOTICS.

ARISTOLOCHIA *Serpentaria*. Gynandria Hexandria. Sarmientaceæ. Virginia, Carolina and other parts of America (*Serpentaria Virginiana*. Radix). Virginia Snake-root. The root of this plant is a powerful diaphoretic, frequently resorted to in typhoid fevers, and in obstinate intermittents. As it is a strong stimulant, it ought never to be prescribed where the pulse is full or tense, where there is local inflammation, or where the primæ viæ have not been previously evacuated. It is given in substance, in decoction, in infusion, and in tincture. Of the powdered root the dose is from fifteen to twenty grains. The decoction is made by boiling two or three drachms of the root in ten or twelve ounces of water down to half a pint. The Peruvian bark is frequently boiled with it (*Thesaurus Med.* p. 145). As the active particles of the serpentaria are of a very volatile nature, much of them is lost in the boiling. On this account, an infusion in hot water is a better preparation. In that case the proportions may be half an ounce of the root to ten ounces of water. In the *Tinctura Serpentariæ*, Ph. Lond. et Eblan. the proportions are, three ounces of serpentaria to two pints of proof spirit. In the Dublin pharmacopœia the difference consists in using two pounds instead of two pints of spirit of wine, and in digesting for seven days instead of eight days. This is stronger than the *Tinctura Aristolochiæ Serpentariæ*, Ph. Ed. which is made with only two ounces of serpentaria and one drachm of cochineal to two pounds and a half of the spirit. Dose of the former, one or two drachms; of the latter, two or three. These

tinctures are frequently added to decoctions of the Peruvian bark, camphor-mixture, &c. *Wedel de Serpentaria Virginiana*, 1710, and for detached observations on this drug, consult the writings of *Sydenham*, *Pringle*, *Lysons*, and *Hillary*.

¶ *ASTRAGALUS exscapus.* *Diadelphia Decandria.* *Papilionaceæ.* Some parts of Germany, and in Hungary. (*Radix*). Stemless Milk Vetch. Within these few years, a decoction of the root of this plant has been cried up as a specific against the venereal disease. Some direct half an ounce of the dried root, cut in small pieces, to be boiled in fifteen ounces of water down to twelve ounces. This quantity is drunk warm morning and evening. Others boil the same quantity of the root in sixteen ounces of water down to eight ounces, to be taken in the same manner. Its principal operation is by the skin. Sometimes it excites a flow of urine. Like many other vegetables that promote the exhalation from the surface of the body, it has been found serviceable in cases of confirmed syphilis; but notwithstanding all the recommendations of the Hungarian professor *Winterl*, and the favourable accounts of the trials of it at the Vienna Hospital, under *Quarin* and others, we do not think that British practitioners will, in venereal cases, be induced to substitute it in place of other substances, whose powers in counteracting, and destroying the syphilitic virus are unquestionably so much greater. Better success may be expected from it in arthritic and rheumatic affections; but even in these disorders, the experience that has hitherto been had of it, is not sufficient to entitle it to be

preferred to other diaphoretic vegetables of longer standing and more note. In its general effects, it coincides with the guaiacum shavings and mezereum-root; and though it may be equal, it does not appear to be superior to them. On the whole, therefore, we are inclined to consider it as superfluous addition to the materia medica. *Quarin* Animadversiones practicæ, 1786 *Winterl* de Astragalo exscapo, 1789. *Wegerich* de Astragali exscapi radice, 1789. *Crichton* in the ninth volume of the London Medical Journal. *Tietz* de Virtute Astragali exscapi antivenereâ, 1790. For the observations of *Werner* and *Carminati* on this vegetable the reader is referred to the 6th volume of *Murray's* Apparatus.

CALLICOCCA *Ipecacuanha*. (See p. 151, 170). *Ipecacuanha*. In minute doses of half a grain or a grain, this root is frequently employed to promote perspiration in gout, rheumatism, and the advanced stage of typhus. With the same intention it is sometimes prescribed in somewhat larger doses, viz. five or six grains, in dysenteric cases. In arthritic and rheumatic affections it is commonly given in conjunction with opium and vitriolated kali, viz. under the form of the *Pulvis Ipecacuanhæ compositus*, Ph. Lond. et Eblan. *Pulvis Ipecacuanhæ et Opii*, Ph. Ed. as mentioned at p. 172. In like manner the *Vinum Ipecacuanhæ*, Ph. Lond. Ed. et Eblan. is employed as a sudorific in the same disorders, in doses of twenty, thirty, or fifty drops.

DORSTENIA *Contrajerva*. Tetrandria Monogynia. Scabridæ. Mexico. Peru. West Indies. (Con-

trayerva. Radix). Contrayerva. The root of this plant is one of those stimulant diaphoretics that are frequently prescribed with good effect in typhoid fevers, malignant exanthematic diseases, and the advanced and sinking stage of dysentery. It is given in substance in doses of fifteen or twenty-five grains. The *Pulvis Contrayervæ compositus*, Ph. Lond. is made by triturating five parts contrayerva-root with eighteen parts of the compound powder of crab's-claws. Dose, from fifteen grains to half a drachm. A decoction of this root is employed advantageously with vinegar and other additions (*Fothergill* on the Putrid Sore Throat and *Withering* on the Scarlet Fever) as a gargle in the malignant angina and febris scarlatina. (*Thesaurus Medicam*, p. 147. *Wedel* de Contrayerva, 1712.)

GUAIACUM officinale. Decandria Monogynia Grinales. Arbor. South America and the West-Indies. (Lignum et Gummi-resina) Guaiacum. A decoction of the wood or shavings of this tree operates readily by perspiration, and sometimes by urine. It is employed in rheumatic, gouty, scrophulous, and venereal cases; also, in lepra, and other diseases of the skin. The wood is an ingredient in the *Decoctum Sarsaparillæ compositum*, Ph. Lond. et Eblan. (see p. 224). and forms the basis of the *Decoctum Guaiaci compositum*, Ph. Ed. (formerly called *Decoctum Lignorum*) which is made by boiling guaiacum shavings three ounces, raisins two ounces, sassafras and liquorice-root, each one ounce in ten pounds of water, till half is evaporated. Dose, four or six ounces, three or four times in a day. The gum-resin is given either in substance, or dif-

fused in water, or dissolved in spirit of wine or in spirit of ammonia. In the first way it is generally prescribed in the form of pills or boluses (*Thesaurus Med.* p. 102) in doses of fifteen or twenty grains. For diffusing it in water it is triturated with mucilage of gum arabic (*Ibid.* p. 106) in the proportion of about twenty grains of the gum guaiacum to every ounce of mint or other distilled water. The solution in spirit of wine is made in the proportion of one part of the gum-resin to two parts and a half of rectified spirit (alkohol) digested together for ten days and strained. Such is the *Tinctura Guaiaci officinalis*, Ph. Ed. formerly called Elixir Guaiacinum). Dose, two or three drachms. The solution in spirit of ammonia is made by digesting for three days, four ounces of gum-guaiacum in a pint and a half of compound spirit of ammonia. This is the *Tinctura Guaiaci*, Ph. Lond. (formerly called *Tinctura Guaiacina Volatilis*). The *Tinctura Guaiaci Volatilis*, Ph. Eblan. *Tinctura Guaiaci Ammoniata*, Ph. Ed. (formerly called Elixir Guaiaci Volatile) is made by digesting for seven days, four ounces of guaiacum in one pound and a half of compound spirit of ammonia (ammoniated alkohol). Dose, from 1 to 3 drachms. *Ulric de Hutten* de Morbi Gallici curatione per Lignum Guaiaci, 1519. *Juncker* de Morborum medicamentis per Diætam et lignum Guaiacum, 1624. *Gruner* de Specifico antipodagrico Americano, 1778. *Fowler's* Reports of the Effects of Bloodletting, Sudorifics, &c. in Rheumatism, 1795.

LAURUS *Camphora.* Enneandria Monogynia. Oleraceæ. Arbor. Sumatra, Borneo, Japan, and

other parts of the East Indies. (Camphora). Camphor or Camphire. This singular substance, which possesses many of the chemical properties of an essential oil, and which is extracted from the root, branches, and wood of the tree by distillation (and is also found naturally concreted between the bark and the wood of the tree) is frequently and successfully employed to promote perspiration in various acute and chronic diseases, such as fevers, (especially of the malignant kind) rheumatism, gout, hysteria, &c. In these cases it has an exhilarating and cordial effect. It is given in doses of five to twenty grains. In larger quantities it operates as a narcotic.

The benefit which has been obtained from the employment of camphor in opposite states of the body, in inflammatory as well as asthenic diseases, in small-pox as well as in typhus, in mania as well as in hysteria, in pleurisy as well as in asthma, seems at first very extraordinary ; and has given rise to much controversy among medical writers, of whom some have maintained it to be a sedative and refrigerant, others, on the contrary, a cordial and stimulant. In a synopsis of this kind, which professes to comprize practical matters only, it cannot be expected that we should enter into a detail of the arguments on either side. They will be found in the different treatises quoted at the end of this article. We shall not dismiss the question, however, without remarking, that the apparent contradiction in the use of this drug is easily reconciled, by the reflection, that, in the inflammatory disorders above-mentioned it only affords relief when pre-

vious evacuations have been procured, and not even then, unless pain and irritation remain. Thus it is that it sometimes proves serviceable in acute rheumatism, by abating pain; in small-pox attended with convulsions, and in the delirium of inflammatory fevers, by allaying irritation. In these cases it acts as an anodyne and antispasmodic, as well as a sudorific; but it is still the same cordial medicine; otherwise there would be no necessity that blood-letting, and other modes of depletion should precede its use, or that antimonials or nitre should be given in conjunction with it. Yet without one or other of these conditions, it will always be hurtful in truly inflammatory disorders.

This drug may be prescribed in the form of pills, being previously softened with spirit of wine, and afterwards beaten up with mucilage of gum-arabic, or some of the conserves; but it is best administered in a state of minute division, and suspension (for it is not a perfect solution) in water, or mucilaginous liquids, as in the *Mistura Camphorata*, Ph. Lond. (formerly called *Julepum e Camphora*) which is made by triturating a drachm of camphor first with a little rectified spirit of wine, and afterwards with half an ounce of white sugar; then gradually adding a pint of boiling water, and straining the whole. An ounce and a half or two ounces of this mixture may be given for a dose. Where this drug is employed as the principal means of cure, it must be given in larger quantities than we find to be contained in the ordinary doses of this preparation, since a portion of the camphor here directed is left

upon the filtre in straining the mixture. This remark applies equally to the *Emulsio Camphorata*, Ph. Ed. which is made by triturating one scruple of camphor with two drachms of blanched almonds, one drachm of fine sugar, and six ounces of water, and then passing the whole through a strainer. When we wish to be certain how much we are giving of this drug, we should incorporate it with aqueous liquors by means of gum arabic, without passing the mixture through a filtre. (*Thesaurus Medicam.* p. 227). Camphor is advantageously combined with lemon-juice, vinegar and other acids in cases of typhus fever; with ammonia and aromatics in cases of atonic and irregular gout; with calomel, antimonials, and nitre, in acute rheumatism and other inflammatory fevers; with ether, magnesia and opiates in cases of hysteria; and with squill and ipecacuanha in asthmatic complaints. For other remarks on this drug see STIMULANTS (where notice is taken of its external application) and ANTISPASMODICS. *Wedel de Camphora*, 1697. *Hoffman de Usu Camphoræ internus* 1717. *Tralles de virtute Camphoræ refrigerante*, 1734. *Werlhof de Camphoræ usu in febribus*, 1735. *De Berger de Camphoræ virtute in febribus in the Commercium Litterar.* Norimberg, 1735. *Cohaïsen de Camphoræ usu in pleuritide*, 1743. *Cartheuser de insigni Camphoræ activitate medica*, 1745. *Rosenstein's* account of the salutary effects of Camphor in a contagious epidemic, in the 6th volume of the Swedish Transactions, 1751. *Buchner de præstantia Camphoræ in deliriis*, 1763. *Alexander's* Experiments on 'Camphor' in the 57th Volume of the Philosophical Transactions, and also in his Experimental Essays, 1768. *Menghini de*

Camphora, in the 3d and 4th Volumes of the Comment. Instituti Bononiensis. *Lysons* on the effects of Camphor and Calomel in fevers, 1771. *Collin* de Camphoræ viribus in Observat. Med. Par. 3. 1773. *Cullen* Mat. Medica, 1789. References to other treatises will be found under ANTISPASMODICS.

LAURUS *Sassafras*. Class and Order the same as the last. Arbor. Virginia, Carolina, Florida. (*Sassafras*. Lignum, radix, ejusque cortex). *Sassafras*. A decoction of the wood or chips of the root and young branches of this tree, is frequently employed in scorbutic, rheumatic, and gouty cases, and also in some cutaneous diseases. It operates chiefly by perspiration. This effect, however, it produces in too slight a degree to be trusted to alone. It is therefore generally prescribed in conjunction with the guaiacum-wood, and other more powerful diaphoretics. *Sassafras* is an ingredient in the *Decoctum Sarsaparillæ compositum*, Ph. Lond. (see p. 225) and in the *Decoctum Guaiaci compositum*, Ph. Ed. (see p. 243). As the medicinal particles of this wood are of a volatile nature, many of them are dissipated by long boiling; hence an infusion is preferable to these decoctions. The maceration in this case should be continued for the space of 2 or 3 days. The essential oil distilled from the root, (*Oleum Sassafras*, Ph. Lond. et Ed.) seems to possess no advantages over any of the other aromatic oils. Of the wood and oil it may perhaps be justly said, that they are chiefly indebted to their fragrancy for the place they still hold in the materia medica,

RHODODENDRON *Crysanthum*. Decandria Monogynia. Bicornes. Frutex. Siberia. (Folia et Ramuli). Rhododendron. For the first account of the medicinal properties of this shrub, we are indebted to *Gmelin* and *Pallas*. The leaves and young branches are the parts that are in use. They are boiled or steeped in water. The decoction has a disagreeable smell, and to the taste is rough, bitter, and acrid. When made strong, and taken freely it produces intoxication. *Gmelin* relates in his *Flora Sibirica*, that the inhabitants on the banks of the river Lena, who, in their shooting and hunting excursions and in getting the glacies mariæ (talc or Muscovy glass) are obliged to climb steep and almost inaccessible mountains, have recourse to this decoction to remove violent pains of the knee joints to which they are liable from these occupations. And *Pallas* mentions, in his *Travels* (see also his *Flora Rossica*) that it is a common and successful remedy among some of the Tartar tribes, in arthritic and other painful disorders. They drink it till it brings on some degree of vertigo and confusion of the head, which effects are generally accompanied by a tingling sensation in the parts affected, and an abatement of pain. In consequence of these testimonies in its favour, trials were made of it first in Russia, then in Germany, and afterwards in Sweden, and other parts of the Continent, and also in Scotland. Professor *Kölpin* gave it to fifteen patients, some of whom had atonic, others inflammatory gout, and others were affected with chronic rheumatism. In almost all it appeared to afford some relief, and in the majority it removed the complaints. In moderate doses it produced little sensible effect; but

when taken in large quantities it brought on nausea, vomiting, purging, transitory disturbance of vision with epiphora, sneezing, tingling in the nose, burning sensation in the throat, tightness across the chest, and in several instances the intoxication or stupefaction before-mentioned. It was found (as might naturally be expected from this account of its operation) to be improper where there was a full pulse with much fever. An infusion of this vegetable was prescribed by *Dr. Home* to three patients in the Edinburgh hospital, but not with the same success. On these experiments it has been remarked, 1st. That in two out of the three cases there was too much fever at the time the infusion was administered; 2dly. That, even if there had been no fever, the medicine being given in infusion instead of decoction, was not of a proper degree of strength; 3dly. That sufficient time was not allowed for it to produce its full effect, the medicine being left off in two cases out of the three on the fourth day from its first exhibition; and 4thly. That conclusions drawn from so few as three trials only, and under the exceptionable circumstances above-mentioned, can have very little weight. It is worthy of notice, that the patient who took the infusion for the greatest length of time, and who seems to have been by far the fittest subject for the experiment, “*was cured by one dose of Dover’s powder,*” given the night after the infusion was laid aside. It is somewhat extraordinary that a case of chronic rheumatism, of more than four months standing, should thus suddenly give way to a single dose of this powder! Is it to be inferred that the rhododendron-infusion, which the patient had

been taking for ten days before, and which had produced plentiful perspiration, had no share in this salutary change, because it did not happen till the day after the infusion was discontinued? But supposing the rhododendron to be unequal to the cure of chronic rheumatism, by itself; yet if, after ten days use, it can render the disease removable by a single dose of an opiate powder, it surely cannot be disregarded as a trifling or inefficacious medicine. The sensible effects of the rhododendron infusion in *Dr. Home's* patients were head-ach, giddiness, drowsiness, nausea, and sometimes purging. In one instance it increased the quantity of urine and brought out copious sweats. Besides the cases above-mentioned, two histories of arthritic patients are related by *Zahn*, in which, after other remedies had been tried in vain, the rhododendron given in decoction, effected a cure. On the whole, therefore, the evidence of those practitioners who have given this plant a fair trial is sufficiently favourable to induce physicians to have recourse to it in such obstinate rheumatic and arthritic affections as resist the guaiacum and other sudorifics. It would be no difficult matter to get a supply of it through Russia and Germany; and for medical purposes the leaves and twigs are as good, when dried, as they are in the recent state. The decoction is prepared and used in the following manner. Put from two drachms to half an ounce of the twigs and leaves into a pot, add to them about ten ounces of water, cover the pot over with a close lid, and keep the whole in a state of gentle ebullition for twenty-four hours. Of the strained liquor give an ounce or more, once or twice a day.

It is advisable to begin with a weak decoction at first, and gradually to increase the strength and quantity of the medicine, and frequency of repetition, according to its effects. *Kölpin's* Practical Observations on the use of the *Rhododendron* (in the German tongue) 1779. *Home's* Clinical Experiments (second edition) 1782. *Zahn de Rhododendro*, 1783. *Murray's* Aparat. Med. Vol. VI. 1792. *Woodville's* Med. Botany, 1792, Vol. III. p. 404, where it is erroneously remarked, that this plant is not to be found in *Murray's* Apparatus Med.

N. B. It was natural to suppose that other species of the genus *Rhododendron* might possess properties similar, and perhaps not inferior to those of the *Rhododendron Crysanthum*. Accordingly trials have been made with the *Rhododendron ferrugineum*, a native of the Swiss and Italian Alps, and consequently more easily procured than the Siberian plant. It appears, however, that the Europæan falls far short of the Asiatic species in medical efficacy; so that the one cannot properly be substituted for the other.

SAMBUCUS nigra. (See p. 200). Common Elder. A strong infusion of the flowers is frequently employed by the country people to promote perspiration in colds, catarrhs, and other febrile disorders. The inspissated juice of the berries, the *Succus Baccæ Sambuci spissatus*, Ph. Lond. and *Succus spissatus Baccarum Sambuci*, Ph. Ed. (formerly called *Rob Sambuci*) has the same effect, when dissolved in warm water and taken freely.

SOLANUM Dulcamara. (See p. 225). Woody Night Shade. Bitter Sweet. The decoction of this plant, noticed at the page above referred to, has been used with considerable success, to produce sweats in asthmatic, rheumatic, and venereal cases. Its narcotic quality, joined to its sudorific action, causes it to have a powerful effect in abating the pains in the two last-mentioned disorders.

KALI nitratum, Ph. Lond. *Nitras Potassæ*, Ph. Ed. Nitrum. (See p. 229). Nitrated Kali. Nitrate of Potass. Nitre. This neutral salt, given in some mucilaginous vehicle, in small doses of ten or twelve grains, frequently repeated, operates favourably by perspiration in acute rheumatism, and some other febrile disorders. The present generation, whose moving fibres are more easily acted upon than those of the last and penultimate race, cannot bear this medicine in the large quantities in which it was formerly prescribed by *Sydenham*, and has latterly been given by *Brochlesby*. More than fifteen grains taken at once, generally create disturbance in the stomach and bowels, and have a laxative instead of a diaphoretic effect.

Spiritus Ætheris Nitrosi, Ph. Lond. et Ed. *Liquor Æthereus Nitrosus*, Ph. Eblan. (see p. 229). Spirit of Nitrous Ether. Nitrous Ethereal Liquor. In doses of 60 or 80 drops, this preparation is in some cases usefully joined with other diaphoretics.

(3) *From the Mineral Kingdom.*

AQUA tepida. Warm water promotes perspiration in a powerful manner, not only when taken into the stomach, but also when applied outwardly to the surface of the body. Hence frequent, small draughts of pure water, heated to the temperature of 96 or 98, of Fahrenheit's thermometer, will often suffice, in cases of cephalalgia, rheumatism, and arthritis, to restore the suppressed evacuation by the skin, and greatly to relieve and even to remove those complaints.

Without the joint employment of hot-water along with them, the various medicines of this section could not produce their full effect. It is their best auxiliary, indeed the only medium by which they are brought into action. Let practitioners, then, when they prescribe antimonials, camphor, guaiacum, and other diaphoretics, always keep in mind the necessity of assisting their operation by the free use either of warm water alone, or of warm aqueous liquors, such as infusions of balm or tea, or mucilaginous decoctions, such as barley-water, gruel, and the like. Inattention to this point, is a frequent cause of the unsuccessful treatment of acute diseases. See DILUENTS.

Water of a blood heat, (96) and of a temperature exceeding that of the blood by a few degrees, is also applied externally to the whole surface of the body (*Balneum calidum*) for the purpose of exciting perspiration in rheumatism, gout and palsy;

or only partially, as to the feet (*Pediluvium*) in febrile disorders, as will be more particularly noticed under STIMULANTS.

ANTIMONIUM (Stibium). Antimony. The different preparations of this metal used for medicinal purposes may be divided into, 1. *The sulphurated compounds.* 2. *The oxydized and subsaline preparations.* 3. *The saline preparations.*

1. To the *sulphurated compounds* belong the so called

(a) *ANTIMONIUM crudum* (*Antimonium Sulphuratum nativum*). *Sulphuretum Antimonii*, Ph. Ed. Crude Antimony. Native Sulphurated Antimony. Sulphuret of Antimony; which was formerly prescribed to promote perspiration in gouty and rheumatic cases, in cutaneous diseases, and in glandular obstructions; but on account of its little solubility in the juices of the stomach and bowels, as well as on account of its occasional contamination with other metallic substances of a noxious quality, it has been justly laid aside in modern practice; and the more certain artificial preparations of antimony are now universally employed in its place. Dose, from ten to thirty grains and upwards. *Stahl de usu Antimonii crudi*, 1730.

(b) *Sulphur Antimonii præcipitatum*, Ph. Lond. *Sulphuretum Antimonii Præcipitatum*, Ph. Ed. *Sulphur Stibiatum Rufum*, Ph. Eblan. Precipitated Sulphur of Antimony. Precipitated Sulphuret of

Antimony ; Golden-coloured Stibiated Sulphur (see p. 163) and

(c) *Kermes Minerale. Sulphur Stibiatum Fuscum*, Ph. Eblan. Brown Stibiated Sulphur. Mineral Kermes. (see p. 164) both which are used in the same cases as the native sulphurated antimony (crude antimony) ; but in very minute doses, such as one, two or three grains.

2. To the *oxydized and subsaline preparations* of this metal belong the

(a) *ANTIMONIUM calcinatum*, Ph. Lond. Calcinated Antimony (*Antimonium Diaphoreticum*). This is obtained by mixing together one part pulverised antimony (sulphuret of antimony) with three parts powdered nitre (nitrate of potass) and throwing the mixture little by little into a red-hot crucible. The white substance that remains after the deflagration, is kept in the fire for about half an hour, and is then taken out and suffered to cool, when it is reduced to powder and washed with distilled water. There still remains united with the oxyd of antimony thus obtained, a small proportion of the alkaline basis (potass) of the nitre ; so that it is not a pure oxyd, but a subsaline oxyd of antimony. This preparation was formerly a favourite diaphoretic in febrile disorders, and was given in doses of eight or ten grains. In modern practice it has been superseded by the

(b) *Pulvis Antimonialis*, Ph. Lond. *Oxidum Antimonii cum Phosphate Calcis*, Ph. Ed. *Pulvis Sti-*

biatus, Ph. Eblan. (Antimonium cum Cornu Cerviustum). Antimonial Powder. Oxyd of Antimony with Phosphate of Lime. According to the London. Ed. and Dublin pharmacopœias, it is made by mixing together equal parts of pulverized antimony (sulphuret of antimony) and hartshorn shavings, and putting them into an iron pan, made red hot, and keeping them constantly stirred till they are burnt to a grey coloured mass, which is then taken from the fire, rubbed to powder, and put into a coated crucible, with another crucible (in the bottom of which a small hole has been previously bored) inverted over it, and luted to it. It is then put into the fire, and subjected to a white heat for two hours; after which it is taken out, and when cold, is reduced to a very fine powder. This powder, which consists of oxyd of antimony and phosphate of lime, with a small portion of pure lime, is supposed to be nearly the same, as *James's* celebrated Fever Powder. (*Dr. George Pearson* on the Composition of *Dr. James's* Powder in the Philosoph. Transact. for 1791). It cannot however be given in such large doses as *Dr. James's* febrifuge. In all inflammatory disorders, and especially in fevers, accompanied with a quick, full, and hard pulse, it is an excellent diaphoretic, but like many other valuable medicines, it has been sometimes abused in the hands of inexperienced and undiscerning practitioners, who, by giving it too freely in typhus-fevers, have thereby brought on colliquative sweats and diarrhœa, which have exhausted the patients. From the bias, however, which, within these few years, has been given to the practice of physic in England, it may be safely asserted, that more mis-

chief happens from withholding this and other antimonial in the disorders that might be cured or relieved by them, than from employing them in cases in which they are improper. The antimonial powder or oxyd of antimony, with phosphate of lime, is given in doses of from three to eight grains, repeated every second, third, or fourth hour. In larger doses it operates as an emetic. It is scarcely necessary to add that its diaphoretic operation should be assisted by plentiful dilution with tepid aqueous liquids. As it is insoluble in water, it is prescribed either in the simple powdery form, to be taken in jelly, or in the form of boluses or pills. Sometimes calomel and opium are advantageously joined with it.

As the so called pulvis antimonialis is liable to considerable variation in its quality, according to the greater or less intensity of the fire during its calcination, *Mr. Chenevix* has suggested a new method of obtaining a similar product of oxyd of antimony, and phosphate of lime, in the humid way, that is by precipitation. See Phil. Trans. for 1801.

(c) *Crocus Antimonii*, Ph. Lond. *Oxydum Antimonii cum Sulphure per Nitratem Potassæ*, Ph. Ed. *Stibium Nitro-Calcinatum*, Ph. Eblan. According to the London and Dublin pharmacopœias this is obtained by first deflagrating, and afterwards melting together a mixture of antimony 1lb. nitre 1lb. sea-salt 1 ounce. The melted matter when cold is separated from the scorix. According to the Ed. pharmacopœia it is obtained by deflagrating together equal weights of sulphuret of antimony

and nitrate of potass. The reddish matter, freed from the whitish crust, is then pulverized and repeatedly washed with hot water. This product is oxyd of antimony with an admixture of undecomposed sulphuret of antimony, according to the last mentioned process; but according to the formula of the London college, with an admixture of muriated antimony, in consequence of the decomposition of the sea-salt. It is used for making the *Antimonium tartarisatum* and *Antimonium muriatum*.

(d) *ANTIMONIUM vitrificatum*, Ph. Lond. *Oxidum Antimonii cum Sulphure Vitrificatum*, Ph. Ed. (formerly *Vitrum Antimonii*). It is prepared by first roasting pulverised antimony (sulphuret of antimony) in a moderate degree of heat, till it ceases to emit fumes, and afterwards putting it into a crucible, and subjecting it to a strong heat, till it is brought into infusion, when it is taken from the fire and poured out. This is oxyd of antimony, with a small proportion of sulphuret of antimony. It is used for making the *Vinum Antimonii*, Ph. Lond.* *Antimonial Wine*, of which the composition has been already noticed at p. 175. To what is there said, we shall here add, that the *Vinum antimonii*, prepared from glass of antimony, is, in fact, nothing more than a weak or imperfect *Vinum antimonii tartarisati*, since it is the acid of tartar alone which is present in the wine that dissolves the vitrified antimony, of which the quantity that is dissolved always varies according to the quality of the wine, i. e. according to the quantity of tartar which it contains. How much

* This belongs to the saline preparations of antimony, among which it is afterwards inserted at p. 264.

better, then, is it first to combine the antimonial oxyd and tartaric acid together, and afterwards to add the compound to the wine, as is done in the case of the proper *vinum antimonii tartarisati*? A preparation which renders this other totally superfluous. Vitrified Antimony is also used in the preparation of the

(e) *Oxidum Antimonii Vitrificatum, cum Cera* (formerly *Vitrum Antimonii Ceratum*), Ph. Ed. which is made by adding eight parts vitrified oxyd of antimony with sulphur, to one part melted wax, and letting the mixture remain in a gentle heat for a quarter of an hour, stirring it all the while with a spatula. It is then poured out, and when cold, is round to powder. Dose, from three grains to 10 or 15 grains. It is generally prescribed in the form of a powder, triturated with sugar, testaceous substances or magnesia. For many years past this preparation has been regarded almost as a specific in cases of dysentery, diarrhœa, hæmorrhages, &c. yet in these and various febrile disorders in which it has been recommended, it has no just claim to being preferred to other antimonials, since all the good effects that have been obtained from it, may be traced to the nausea or sickness, and concomitant diaphoresis, which it occasions in common with them; but with less certainty, as its doses are not so easily regulated. If we consider this preparation attentively, we shall soon be convinced how little it merits the high commendations that have been bestowed upon it. Is it likely (as a foreign writer has pointedly asked) that the few grains of wax which are contained in the ordinary, or even the

largest doses of this medicine, can be of any use in dysentery or diarrhœa? Certainly not. If any benefit is to be expected from wax in these disorders of the bowels, it must be given in the quantity of half a drachm, frequently repeated, so that as much as half an ounce may be taken in the course of the day and night. It must not only be given in these quantities, but, if it is to be of any use, it must further be rendered miscible with, and soluble in, the juices of the primæ viæ by previous trituration with mucilaginous liquids, otherwise it will pass through the body without producing any effect. Given, then, as it is in the vitrum antimonii ceratum, in the doses of five or 10 grains, and without being previously rendered capable of mixing with or dissolving in the juices of the body, the wax in that preparation can have no share whatever in its medicinal operation. The most that can be allowed to it is, that by its tenacious quality and insoluble nature, it, in some measure, defends the vitrified antimony from being acted upon by the gastric and intestinal fluids; but this surely is no desirable thing. On the contrary, it only serves to render the operation of the antimony less certain. As then it appears that the good effects of the vitrum antimonii ceratum, are referable to the vitrified antimony alone, which, as an imperfect oxyd, is less determinate in its operation than some other preparations of this metal; it follows, that it ought in all cases to give way to them, and may consequently be regarded as a superfluous addition to the catalogue of antimonial preparations. Supposing that the combination of antimonials with wax, may sometimes be useful in alvine fluxes (though we are persuaded, that, gene-

rally speaking, where the one is proper the other is not) the best way, indeed the only effectual way, of making that combination would be to add a saline preparation of antimony (for instance, antimonial wine or tartarised antimony) to an emulsion of wax. When these two substances are thus mixed together in a proper manner, and in due proportions, their doses may be regulated with great exactness, and consequently their operation will be rendered more certain. *Geoffroy* on the Effects of the Vitrum Antimonii Ceratum, Phil. Trans. Vol. 47. *Young* and *Pringle*, in the Edinburgh Medical Essays and Observations, Vol. v., and also in the last-mentioned Author's Diseases of the Army.

(f) *Calx Stibii Præcipitata*, Ph. Eblan. Precipitated Calx of antimony (*Pulvis Algarothi. Magisterium Antimonii*). This is obtained by first dissolving 8 ounces of mild vegetable alkali in 40lbs. of water and filtrating; then adding to this solution 8 ounces of caustic muriated antimony, and washing and drying the precipitate thus obtained. This precipitated oxyd of antimony is used by the Dublin college for making their tartarum stibiatum, or emetic tartar.

(3) The *saline preparations* of this metal which are used in pharmacy and medicine are as follow;

(a) *ANTIMONIUM muriatum*, Ph. Lond. *Murias Antimonii*, Ph. Ed. *Stibium Muriatum Causticum*, Ph. Eblan. (*Butyrum Antimonii. Causticum Antimoniale*). Muriated Antimony. Muriate of An-

timony. Caustic Muriated Antimony. It is made in the following manner: Take crocus antimonii (oxyd of antimony with sulphur by nitrate of potass) reduced to powder and vitriolic acid (sulphuric acid) each, one part, exsiccated sea-salt (dried muriate of soda) two parts. Put the vitriolic acid into a retort, and gradually add to it the sea-salt and crocus antimonii previously mixed together; then distil it in a sand-heat. Let that which comes over in the distillation, be exposed to the air for some days; after which pour off the liquid part from the sediment. This is the muriated antimony, which is sometimes applied externally by the surgeons as an escharotic, to destroy warts, fungus flesh, and specks on the cornea; on which occasions, however, it should be used very sparingly, and with the greatest caution. The other purpose to which it is applied, is for making the Calx Antimonii præcipitata, Ph. Ebl. above described, by the combination of which, with the acid of tartar, is obtained, according to the process of the Dublin college (see p. 165) the following article, viz. the

(b) *ANTIMONIUM tartarisatum*, Ph. Lond. *Tartaris Antimonii*, Ph. Ed. *Tartarum Stibiatum*, Ph. Eblan. (Tartarus Emeticus). (The two different modes of making this preparation have been already described at p. 165). As a diaphoretic, tartarised antimony is given in fevers and inflammatory disorders, in the minute doses of a quarter of a grain or half a grain, every third or fourth hour; dissolved in common water, mint-water, or camphor-mixture. Tartarised antimony given in this manner the late Dr. G. Fordyce preferred as a diaphoretic to the

Pulvis Antimonialis (Oxydum Antimonii cum Phosphate Calcis). In arthritic and rheumatic cases, it is sometimes combined with opiates. For observations on the use of tartarised antimony as an Expectorant, see p. 165, and as an Emetic, p. 174.

(c) *Vinum Antimonii tartarisati*, Ph. Lond. *Vinum Tartritis Antimonii*, Ph. Ed. *Vinum Tartari Stibiati*, Ph. Eblan. (see p. 175) where is noticed the relative strength of this preparation, as made according to the different proportions assigned in the London and Edinburgh pharmacopœias. As a diaphoretic, this preparation is given in doses of fifteen, thirty, or forty drops, in inflammatory fevers, in pleurisy, peripneumony, rheumatism, dysentery, catarrh, and all those disorders in which the Antimonial Powder (see p. 256) is employed. What *Huxham* has said of his antimonial wine, may be said of this, viz. that it is an admirable attenuant, deobstruent, and diaphoretic, being capable of pervading and affecting the very minutest vessels, quickly acting and quickly passing off, and having a great advantage (in the inflammatory diseases above mentioned) over other medicines which promote perspiration, in not producing, as they do, a heating effect. *Nihil utique ad sudores excitandos datur aptius, nihil tutius; nam parum admodum excalefacit.*

(d) The *Vinum Antimonii*, Ph. Lond. has been already noticed at p. 259.

For general observations on antimonials, the following authors may be consulted. *Basil Valen-*

mini Currus triumphalis Antimonii, 1624. *Camerarius* de Antimonio, 1735. *Huxham's* Medical and Chemical Observations upon Antimony, 1756. *Buchner* de Antimonio ejusque Tincturis, 1767. *Saunders's* Observations on Antimony, and its Use in the Cure of Diseases, 1773. And *Dr. G. Fordyce's* 3d Dissertation on Fever.

SULPHUR. Brimstone. Sulphur. Although this mineral substance does not appear to be soluble in the juices of the stomach, yet its particles are of so subtile and diffusible a nature, that they are readily taken up by the absorbents, and conveyed into the circulation, penetrating and spreading through the whole system. Hence they manifest themselves by their peculiar smell and other qualities in all the secretions and excretions, and especially in the perspirable matter, which is thereby increased, and acquires the property of tarnishing silver and other metals that are carried about the persons of those who are taking sulphur. It is in consequence of this power which it possesses of promoting perspiration, that it proves a valuable medicine in some cutaneous diseases, in rheumatic and gouty cases, in chronic catarrhs, and in some kinds of asthma. In like manner it is very efficacious in checking the action of mercurials on the salivary glands, and for this purpose it is often employed against ptyalisms brought on by the too liberal exhibition of quicksilver, and also against the paralytic tremors to which miners, metallurgists and certain manufacturers are subject, in consequence of being exposed to mercurial and arsenical effluvia.

As the operation of sulphur is attended with some degree of irritation, and an increase of bodily heat, it seldom suits where there is much febrile condition, or an inflammatory tendency. Under these circumstances, however, it may sometimes be made to agree by joining antimonials with it. Another useful adjunct to it in arthritic and rheumatic cases, is guaiacum. With these admixtures it may be given in the form of powder or pills (*Quarin Animadversiones practicæ*, 1786). Half a drachm of sulphur taken in a little milk, every day upon an empty stomach, is, according to *Cheyne* (*Essay on the true nature of the Gout*, 1728) an excellent preventive of the gout. Sulphur, in its native state, is not fit for internal use, on account of the extraneous matters that are mixed with it; hence, for medical purposes, it is purified by sublimation, which frees it from its earthy and metallic admixtures; and by subsequent ablution with water, which separates any loose vitriolic acid that may adhere to it. In this state of depuration it goes under the name of *Flores Sulphuris loti*, Ph. Lond. Sulphur Sublimatum Lotum, Ph. Ed. et Eblan. Of these the dose is 15 or 30 grains.

¶ The *Sulphur præcipitatum*, Ph. Lond. (formerly called *Lac sulphuris*) is obtained by dissolving sulphurated kali in boiling water, and adding to the filtrated solution as much diluted vitriolic acid as is necessary for precipitating all the sulphur, which is afterwards washed repeatedly till it is deprived of all taste. In this process, the vitriolic acid seizes the alkali which rendered the sulphur soluble in the

water, whereupon the latter falls down to the bottom in the form of a fine powder, which may be considered as pure sulphur, and consequently similar in its qualities and operation to sulphur purified by sublimation, i. e. the flowers of sulphur. Dose, the same as the preceding. It is a superfluous preparation.

By chemical combination with alkalies, whether fixed or volatile, the diaphoretic action of sulphur is much increased. Hence the Sulphuretum Potassæ (Kali sulphuratum) and Sulphuretum Ammoniaë (Hydro Sulphuretum. Ammoniaë) operate more powerfully by the skin than sulphur alone. The combination with the fixed alkali is called

KALI *sulphuratum*, Ph. Lond. Sulphuretum Potassæ, Ph. Ed. Alkali Vegetabile Sulphuratum, Ph. Eblan: (Hepar Sulphuris). This is obtained by melting together, according to the London pharmacopœia, 1 ounce of flowers of sulphur and 5 ounces prepared kali: according to the Ed. pharmacopœia the proportions are equal weights of the same materials, brought into fusion: And according to the Dublin pharmacopœia equal weights of the caustic vegetable alkali and sulphur treated in the same manner. It is given in arthritic and rheumatic cases, in doses of two or three grains made into pills with soap, and repeated every third or fourth hour, with a draught of camphor-mixture, peppermint water, or ginger tea. In larger doses it proves emetic.

Pure sulphur possesses, as before mentioned, a power of counteracting the effects of quicksilver

and other metallic substances, on the human body; but this power is much greater in the kali sulphuratum. Hence the use of this preparation in salivations brought on by the abuse of mercury, and in the disorders occasioned by lead, arsenic, &c. (*Navier Contre-poison de l'Arsenic, du Sublimé Corrosif et du Plomb. 1777*). The combination of sulphur with the volatile alkali is termed

Sulphuretum Ammoniacæ. Hydro Sulphuretum Ammoniacæ, Ph. Ed. (*Hepar Sulphuris Volatile*). This is obtained by distilling together one part sulphur, an equal quantity of sal ammoniac, and 1 part $\frac{1}{5}$ of quicklime (*Boyle Experiments on Colours, 1675*) or from one part flowers of sulphur, two parts sal ammoniac, and three parts quicklime (*Hoffman Observationes physico chemicæ, 1736*), or according to others, six parts quicklime to the last mentioned proportions of the other materials. A small quantity of distilled water is put into the retort along with the materials. It may also be obtained by decomposing sulphuret of iron by means of the muriatic acid, of which there is a formula in the Edinburgh pharmacopœia. This preparation is always in a liquid state. It possesses the same general properties as the sulphurated kali, and may be given in the same cases. It is proper, however, to notice, that it has a much stronger and more immediate effect upon the human body than the kali sulphuratum or sulphuret of potass, and therefore requires more caution in the use of it. From two to five drops make a sufficient dose for adults. It has lately been recommended in diabetes by *Dr. Rollo*. For other remarks on sulphur the reader may consult *Reisig de*

Sulphuris Usu interno, 1768, and reprinted in *Baldinger's Sylloge*. Sulphur is used externally for the cure of the itch. For this purpose it is made into an ointment (*Unguentum Sulphuris*) according to the Lond. pharmacopœia, by mixing together four ounces sulphur with $\frac{1}{2}$ lb. ointment of hog's-lard; according to the Ed. Ph. with 1 part sulphur and 4 parts hog's-lard; according to the Dublin Ph. with 3 ounces sulphur and 5 ounces ointment of hog's-lard. *Spiritus Ætheris Vitriolici*, Ph. Lond. *Æther Sulphuricus cum Alcohole*, Ph. Ed. *Liquor Æthereus Vitriolicus*, Ph. Eblan. Spirit of Vitriolic Ether. Sulphuric Ether with Alcohol. Vitriolic Ethereal Liquor. Excites a diaphoresis in cases of typhus, when given in doses of 60 or 80 drops. See STIMULANTS.

EMMENAGOGUES.

(1) *From the Vegetable Kingdom.*

- ALOE *perfoliata*. Socotorine Aloes.
ANTHEMIS *nobilis*. Chamomile.
BUBON *Galbanum*. Galbanum.
FERULA *Asafoetida*. Assafoetida.
HELLEBORUS *niger*. Black Hellebore.
JUNIPERUS *Sabina*. Savin.
MARRUBIUM *vulgare*. Horehound.
MYRREHA Myrrh.
¶ PASTINACA *Opopanax*. Opopanax.
RHEUM *palmatum*. Rhubarb.
ROSMARINUS *officinalis*. Rosemary.
RUBIA *tinctorum*. Madder.
¶ RUTA *graveoleus*. Rue.
SAGAPENUM. Sagapenum.

(2) *From the Mineral Kingdom.*

- FERRUM *ejusque præparata*. Iron and its preparations.
HYDRARGYRUS. Quicksilver.
-

ELECTRISATIO. Electrization.

Those medicinal agents which are employed to promote the menstrual discharge being for the most part of a stimulant nature, their administration is improper in phlethoric and inflammatory conditions of the body. They are especially adapted to those cases of obstructed and suppressed menses, in which there is a deficiency of animal heat, and a want of energy in the circulating system.

(2) *From the Vegetable Kingdom.*

ALOE perfoliata. Aloes. (See p. 181). As an Emmenagogue, this drug is given in doses of from three to ten grains. Besides the preparations of aloes mentioned at the page above referred to, the following especially belong to this place; viz. the *Pulvis Aloës cum Ferro*, Ph. Lond. (*Pulvis Aloës cum Ferro Vitriolato*) which consists of aloes one part and a half, myrrh two parts, extract of gentian and vitriolated iron, each one part. Dose, from fifteen to thirty grains; the *Pilulæ Aloës cum Myrrha*, Ph. Lond. (formerly called *Pilulæ Rufi*) which consist of aloes two parts, myrrh and saffron each, one part, beaten up with a sufficient quantity of syrup of saffron. Dose, from eight to fifteen grains. The *Pilulæ Aloës et Myrrhæ*, Ph. Ed. consist of aloes four parts, myrrh two parts, saffron one part, beaten into a mass with simple syrup. In consequence of containing less saffron, the Edinburgh pills are stronger than the London. Dose, from five to ten or twelve grains. The *Tinctura Aloës composita*, Ph. Lond. (formerly called *Elixir Aloës*) is made by dissolving aloes and saffron, each, three ounces, in

two pints of tincture of myrrh. Dose, a tea spoonful. The *Tinctura Aloës et Myrrhæ*, Ph. Ed. (formerly called Elixir Proprietatis) is made by digesting two ounces of myrrh in one and $\frac{1}{2}$ lb. of alcohol, and water $\frac{1}{2}$ pound, for the space of four days, and then adding aloes one ounce and a half, saffron one ounce, and digesting again for three days. Dose, from two drachms to half an ounce. The *Tinctura Aloës Ætherea*, Ph. Ed. (formerly called Elixir Proprietatis Vitriolicum) is made by taking myrrh and aloes, each one ounce and a half, saffron one ounce; and after digesting the myrrh in one pound of sulphuric æther with alcohol, for the space of four days in a close vessel, adding the aloes and saffron, and digesting again for four days more. Dose one or two drachms.

ANTHEMIS nobilis. Chamomile. Chamæmelum. (See p. 170). The infusion and extract of the flowers of this herb are useful in cases of obstructed menses. Dose of the *Extractum Chamæmeli*, Ph. Lond. et Ed. fifteen grains or a scruple. The ferrum vitriolatum, and other chalybeates, are frequently joined with it, as well as myrrh.

BUBON Galbanum. Pentandria Digynia. Umbellatæ. Frutex. Africa. (Galbanum. Gummi-resina). The juice which flows from the wounded stem, inspissated and concreted by the heat of the sun. This gum-resin stimulates the intestinal canal and the uterine system much more powerfully than the ammoniacum. It is more laxative than myrrh, but less so than aloes. It is not only useful in promoting the catamenia, but is likewise suited to

remove those nervous and hysterical symptoms which often precede and accompany irregular and deficient menstruation. Dose, from twelve to twenty grains. The *Tinctura Galbani*, Ph. Lond. is made in the proportion of one ounce of the gum-resin to one pint of proof spirit, digested together for eight days. Dose, a drachm. The *Pilulæ Galbani compositæ*, Ph. Lond. (formerly called *Pilulæ Gummosæ*) consist of galbanum, opopanax, myrrh, sagapenum, each, one ounce, asafœtida half an ounce, beaten up with syrup of saffron. Dose, from fifteen grains to half a drachm or two scruples. This formula is too compound. Either the opopanax or sagapenum might be dispensed with. In the *Pilulæ Asafœtidæ compositæ*, Ph. Ed. (also called *Pilulæ Gummosæ*) we have a more simple, and at the same time a more efficacious formula: These pills consist of asafœtida, galbanum and myrrh, each eight parts, rectified oil of amber one part, beaten up with simple syrup. They are stronger than the galbanum pills of the London pharmacopœia; hence from fifteen to twenty grains make a sufficient dose. Galbanum is an ingredient in the *Emplastrum Lithargyri compositum*, Ph. Lond. (formerly called *Emplastrum commune cum gummi*) and in the *Emplastrum Gummosum*, Ph. Ed. See STIMULANTS and ANTISPASMODICS.

FERULA *Asafœtida*. (See p. 152). *Asafœtida*. This warm, stimulating gum-resin holds almost the first place amongst emmenagogue medicines. It is given in doses of ten or twenty grains, made up into pills with myrrh, ammoniacum, and bitter extracts. It is an ingredient in the *Pilulæ Galbani*

compositæ, Ph. Lond. above mentioned, and the *Pilulæ Asæfætidiæ compositæ*, Ph. Ed. of which the composition has been described in the preceding article. The *Tinctura Asæfætidiæ*, Ph. Lond. (formerly called *Tinctura Fœtida*) is made in the proportion of two ounces of the gum-resin to one pint of rectified spirit, digested for six days. Dose, one or two drachms. The *Tinctura Ferulæ Asæfætidiæ*, Ph. Ed. (also called *Tinctura Fœtida*) is made in the proportion of four ounces of asafœtida to two pounds and a half of alcohol, digested for the same length of time. Dose, the same. The *Tinctura Asæfætidiæ*, Ph. Eblan. is made by digesting for eight days, four ounces of asafœtida in two pounds of rectified spirit and eight ounces of water. The *Spiritus Ammoniacæ fœtidus*, Ph. Lond. (formerly called *Spiritus Volatilis fœtidus*) is made by mixing together proof spirit six pints, sal ammoniac one pound, asafœtida four ounces, pot-ash one pound and a half, and with a gentle heat distilling off five pints. In this process the sal ammoniac undergoes a decomposition. Its basis, the muriatic acid, unites with the pot-ash, and lets go the ammonia or volatile alkali, which rises up and passes over into the receiver along with the spirit of wine impregnated with the asafœtida. Dose, from fifteen to thirty or forty drops. The *Alcohol Ammoniatum Fœtidum*, Ph. Ed. (also called *Spiritus Volatilis fœtidus*) is made simply by digesting in a close vessel for twelve hours, half an ounce of asafœtida in eight ounces of spirit of ammonia, and afterwards distilling off eight ounces, in the heat of boiling water. Dose, from fifteen to thirty drops.

¶ *HELLEBORUS niger*. (See p. 193). Black Hellebore. The extract and tincture of this plant, are given as emmenagogues in the doses mentioned at the page above referred to. The last mentioned preparation, viz. the *Tinctura Hellebori nigri* (*Tinctura Melampodii*) was a favourite medicine with Mead (*Monita et Præcepta Medica*, Tom. II. Cap. xix. cum notis *Wintringham*, 1773). He gave it in the quantity of a tea spoonful twice a day. Since his time other practitioners have not employed it with the same success.

JUNIPERUS Sabina. Diæcia Monadelphia. Coniferae. Frutex. Siberia, Tartary. (*Sabina*. Folia). Savin. Along with its stimulating and heating property, this plant possesses a great degree of acrimony, on which account considerable caution is required in the use of it. The dried leaves are prescribed in doses of ten or fifteen grains twice a day, in those cases of amenorrhœa in which there is a languid circulation, joined with inirritability. The *Extractum Sabinæ*, Ph. Lond. may be given in the quantity of five or ten grains. The dried leaves are an ingredient in the *Pulvis Myrrhæ compositus*, Ph. Lond. which consists of equal parts of myrrh, savin, rue, and castor. Dose, fifteen or twenty grains. The *Tinctura Sabinæ composita*, Ph. Lond. (formerly called *Elixir Myrrhæ compositum*) is made by dissolving one ounce of extract of savin in one pint of tincture of castor, and half a pint of tincture of myrrh. Dose, forty or fifty drops. *Wedel de Sabina*, 1707.

MARRUBIUM *vulgare*. Didynamia Gymnospermia. Verticillatæ. Indigenous. (*Marrubium album*. Herba). Horehound. An infusion of the herb coincides both in its sensible qualities and in its medicinal effects with chamomile-tea.

MYRRHA. Myrrh. Although this drug, when given by itself, is not powerful enough to remove obstructions of the menses, even in doses of half a drachm or more; yet, when added to other emmenagogues, it promotes their operation; and hence in these cases is of considerable use.—The following preparations, employed as emmenagogues, in which this gum-resin is an ingredient, have been noticed at the places respectively referred to. The *Pulvis Myrrhæ compositus*, Ph. Lond. is composed of myrrh, dried savin, dried rue and castor, each, equal parts. Dose, one or two scruples. The *Pulvis Alöes cum Ferro*, Ph. Lond. at p. 271; the *Pilulæ Alöes cum Myrrha*, Ph. Lond. at p. 271; the *Pilulæ Aloeticæ*, Ph. Ed. at p. 182; the *Pilulæ Galbani compositæ*, Ph. Lond. at p. 273; the *Pilulæ Asæfoetidæ compositæ*, Ph. Ed. at p. 273; the *Tinctura Alöes composita*, Ph. Lond. at p. 271; the *Tinctura Alöes et Myrrha*, Ph. Ed. and the *Tinctura Alöes Ætherea*, Ph. Ed. p. 272. The *Tinctura Myrrhæ*, Ph. Lond. is made by digesting for eight days three ounces of myrrh in proof spirit a pint and a half, and rectified spirit half a pint. The *Tinctura Myrrhæ*, Ph. Ed. is made by digesting for 7 days 3 ounces of myrrh in 20 ounces of alcohol and 10 ounces of water. These tinctures are sometimes given internally in doses of 40 drops or a

drachm; but they are chiefly employed in topical applications, such as lotions and gargles. For other observations on myrrh, see TONICS.

¶ PASTINACA *Opopanax*. Pentandria Digynia. Umbellatæ. Italy, Sicily, and the Southern parts of France. (*Opopanax*. Gummi-resina). *Opopanax*. This gum-resin coincides in its general properties with ammoniacum; and where this last, and myrrh, can be procured, it is totally superfluous.

RHEUM *palmatum*. (See p. 197). Rhabarbarum. Rhubarb. This root may be given with advantage in small doses of five or six grains joined with an equal quantity of vitriolated kali, twice a day for a week before the expected return of the menses, in cases of amenorrhœa. Three grains of vitriolated iron may also be added to it, if it purges. The *Pilulæ Rhei compositæ*, Ph. Ed. (called also *Pilulæ stomachicæ*) are a useful medicine in the above-mentioned cases. They consist of rhubarb one ounce, aloes six drachms, myrrh $\frac{1}{2}$ ounce, volatile oil of peppermint $\frac{1}{4}$ drachm, beaten together with syrup of orange-peel. Dose, twenty or thirty grains. For the other preparations of rhubarb, see CATHARTICS.

ROSMARINUS *officinalis* (see p. 121). Rosemary. An infusion of the sprigs is slightly emmenagogue.

RUBIA *tinctorum*. Tetrandria Monogynia. Stellatæ. Southern parts of Europe, and by cultivation in some of the Northern parts. (Radix). Madder. The clinical experiments instituted at the Edinburgh

hospital, under the direction of *Dr. Home*, have lately brought into notice the root of this plant as an emmenagogue. The physician just mentioned informs us (*Clinical Experiments and Histories*, p. 422) that it was what *Tournefort* has said of this vegetable in his *Materia Medica*, that induced him to give it a trial; but long before the French botanist made his remarks upon it, the *rubia tinctorum* had been prescribed by *Fonseca* in obstructions of the menses. This practitioner gave a large dose of the powdered root at the period when the catamenia should appear; and if this did not succeed, he repeated it again the next month, and so on until the desired effect was produced. In this mode of exhibition the intervals of repetition were too distant. It is certainly better to give it as *Dr. Home* directs, in less doses, such as half a drachm, three or four times in the space of twelve or sixteen hours. But even when administered in this manner, it disappointed the expectations of *Cullen* (*Mat. Med.* Vol. II.) of *Selle* (*New Contributions or Observations relative to Natural History and Medicine*, in the German tongue, 1782) and of *Herz* (*Letters to Physicians*, likewise in the German tongue, 2d. Vol. 1784). However, the last mentioned author, *Dr. Herz*, remarks that, although he has not found this root powerful enough for removing obstinate obstructions and suppressions of the catamenia, yet he has prescribed an infusion of it with good effect in cases of deficient and difficult menstruation. The practitioners above-mentioned, have generally employed this drug without joining any other medicine with it; but some of the neutral salts, such as the vitriolated kali, seem to be useful auxiliaries. *Vog-*

ler's (Pharmaca selecta observationibus clinicis comprobata, 1788) hæmagogue powder, consists of equal parts of madder-root, vitriolated kali, and flowers of sulphur. Of this he gives fifteen or twenty grains three or four times a day, in cases of amenorrhæa, and, as he assures us, with great success. Yet, after all, is madder, as an emmenagogue, superior to rhubarb? It is less purgative than the latter; but in its other effects upon the human body, it coincides with it pretty exactly, and we have reason to believe, that rhubarb given in smaller doses, and combined in the manner above-mentioned with vitriolated kali, is equally efficacious in promoting the periodical discharge of blood from the uterus.

¶ *RUTA graveolens*. Decandria Monogynia. Multisiliquæ. Southern parts of Europe. (Herba). An infusion of this herb in water, is recommended by some old authors in cases of amenorrhæa; but strong infusions of chamomile or horehound may at all times supply the place of such an infusion. The same may be said of the *Extractum Rutæ*, Ph. Lond. et Ed. which is totally superfluous where the *Extractum Chamæmeli* is to be procured.

SAGAPENUM. Gummi-resina. Sagapenum. Between this gum-resin and asafoetida, there is a great affinity. The latter, however, is the strongest; so that where it can be procured, the sagapenum may be dispensed with. Dose, from fifteen grains to half a drachm. It is an ingredient in the *Pilulæ Gallani Compositæ*, Ph. Lond.

(2) *From the Mineral Kingdom.*

FERRUM. Iron. The consideration of the medicinal properties of this metal, at large, belongs to the class of Tonics. In this place it will suffice to remark, that in those cases of amenorrhœa in which there is a languid circulation and pallid condition of the body, the preparations of iron have been prescribed with great advantage, and have in many instances brought about the menstrual evacuation, after other emmenagogues had been tried in vain. On the other hand, chalybeates are improper in those cases of suppressed catamenia, which are accompanied with an accumulation of animal heat and a strong and full pulse.

Iron is used medicinally (1) *in its metallic state* (2) *in an oxydized and subsaline state*; and (3) *in a saline state*.

(1) The *Ferri Limatura purificata*, Ph. Ed. is iron in its metallic state. The iron filings are purified by drawing them upwards through a sieve, with a magnet. Dose, from five to 15 or 20 grains made into pills with myrrh, soap, or bitter extracts.

(2) To the oxydized and subsaline preparations belong

(a) *Ferri oxidum nigrum purificatum*, Ph. Ed. (formerly called *Squamæ ferri*). This oxyd is

the scales of iron found at the foot of the blacksmith's anvil purified by applying the magnet. It is used in making the *Tinct. Muriatis Ferri*, Ph. Ed. (b) The *Ferri Rubigo*, Ph. Lond. *Carbonas Ferri*, Ph. Ed. Rust of Iron. Carbonate of Iron. It is made by moistening iron filings with water, and exposing them to the air till they are converted into rust, which is rubbed in a mortar to a fine powder. Dose, the same as that of the filings. (c) The *Oxydum Ferri Rubrum*, Ph. Ed. (formerly called *Colcothar Vi- trioli*) It is made by urging exsiccated sulphate of iron in a strong fire, till it becomes of a deep red colour. It is employed by the Edinburgh college for making the *Murias Ammoniaë et Ferri*.

(3) Of the saline preparations of iron, used medicinally, the principal are

(a) *FERRUM ammoniacale*, Ph. Lond. *Murias Ammoniaë et Ferri*, Ph. Ed. (formerly called *Flores martiales*). Made according to the London pharmacopœia, by mixing together one part iron-filings with two parts sal ammoniac, and subjecting to sublimation. According to the Edinburgh formula, it is made by mixing together equal weights of the red oxyd of iron and muriate of ammonia, and subjecting to sublimation. This saline compound consists of muriate of ammonia and muriate of iron. Of either preparation, the dose is from five to twelve grains. In the London pharmacopœia there is a *Tinctura Ferri Ammoniacalis*, which is prepared by dissolving four ounces of the ferrum ammoniacale in one pint of proof spirit. Dose, thirty or forty

drops. This is the *Tinctura martis aperitiva Mynsichti*.

(b) *FERRUM tartarizatum*, Ph. Lond. Tartarised Iron. Is made by mixing together into a thick paste, by means of a little distilled water, one part iron-filings and two parts crystals of tartar, and exposing the mixture to the air for eight days in an open vessel, and afterwards drying the same and reducing it to a fine powder. Dose, ten or fifteen grains. It is a triple salt, consisting of tartaric acid, oxyd of iron and potass.

(c) *FERRUM vitriolatum*, Ph. Lond. et Eblan. *Sulphas Ferri*, Ph. Ed. Sal Martis. Vitriolum viride. Vitriolated iron. Sulphate of Iron. Salt of Steel. Green Vitriol. Consists of oxyd of iron and vitriolic acid (sulphuric acid). This chalybeate salt is successfully employed in cases of amenorrhœa depending upon or connected with diminished energy of the sanguiferous vessels. It is given in doses of from one to five grains, in conjunction with myrrh, rhubarb, ammoniacum, aloes, or bitter extracts.—The *Pulvis Aloës cum Ferro*, Ph. Lond. has been already noticed at p. 271.

(d) *Tinctura Ferri Acetati*, Ph. Eblan. is made by taking acetated vegetable alkali and vitriolated iron, each, 1 ounce, alkohol 2lbs. The acetated kali and vitriolated iron are triturated together in a glass mortar, till the mass deliquesces; the alcohol is then added (while the trituration is continued) and the solution is afterwards filtrated.

In this process the 2 salts are mutually decomposed, the vitriolic acid combining with the vegetable alkali, and the acetic acid uniting with the oxyd of iron. The acetated iron thus formed is dissolved by the alkohol, and the vitriolated kali being insoluble, remains on the filtre. Dose, 20 or 30 drops.

(e) The *Tinctura Ferri muriati*, Ph. Lond. et Eblan. (formerly called *Tinctura Martis* and *Tinctura Martis in Spiritu Salis*) is made, according to the London pharmacopœia, by adding three pounds of muriatic acid to half a pound of rust of iron, and letting them remain together (shaking them every now and then) for three days, and afterwards pouring off the liquor from the sediment. This liquor is evaporated to one pound, and, when cold, is gradually mixed with three pints of rectified spirit of wine. The Dublin college direct iron-wire instead of rust of iron, in the same proportion. The *Tinctura Muriatis Ferri*, Ph. Ed. is made by taking three ounces of the black oxyd of iron (scales of iron) reduced to a powder, and as much muriatic acid as, with the help of a gentle heat, is sufficient for dissolving the same; and adding, when the powder is dissolved, so much alkohol as shall make the whole of the liquor amount to two pounds and a half. Of these tinctures, the dose is from ten to fifteen drops.

(f) The ¶ *Vinum Ferri*, Ph. Lond. (formerly called *Vinum Chalybeatum*) is made by digesting for the space of a month, one ounce of iron-filings in one pint of white wine. Dose, from a tea spoonful to a table spoonful. This may be considered as a weak solution of tartarised iron, since it is the

unsaturated tartaric acid, contained in the wine, that dissolves a portion of the iron-filings. In point of strength, it is an uncertain preparation, varying according to the age and quality of the wine. Hence, it is better to prescribe, in place of it, a given quantity of the *ferrum tartarisatum*, which may be more conveniently added to most forms of extemporaneous composition. At all events, if this preparation is to be retained, it should be made with Rhenish instead of Spanish wine, as (after the manner of some of the foreign dispensatories) is done in the Dublin pharmacopœia, under the title of *Vinum Ferratum*, in which the proportions are, iron wire cut into pieces 4 ounces, Rhenish wine 4 pints, digested for a month.

HYDRARGYRUS (see p. 127). Quicksilver. The triturated preparations of this metal, and especially the *Pilule Hydrargyri*, Ph. Lond. et Ed. (see p. 206) are sometimes prescribed with good effect in obstinate suppressions of the menses. In these cases they are given in doses of twelve or twenty grains, joined with ammoniacum, asafoetida or aloes.

CALOMELAS (see p. 137). Calomel. Is likewise employed advantageously in the same cases, in doses of from three to five grains, combined with rhubarb and bitter extracts.

ELECTRISATIO. Electrization. This is one of

the most powerful means that can be employed against obstructed menstruation. Drawing sparks twice a day from the region of the pubes, will often suffice; but shocks are more to be depended upon. *Alberti de Vi Electrica in Amenorrhœa*, 1764. For other observations on this subject, see STIMULANTS, where referencé will be made to various British and foreign authors who have written generally on the medical uses of Electricity,

TABULAR VIEW
OF
THE CONTENTS OF CLASS II.

EMOLLIENTS.

A. DILUENTS.

(1) *From the Animal Kingdom.*

Jus Carnis Bubulæ dilutum. Beef Tea.
Jus Pullinum dilutum. Chicken Water.
Serum Lactis. Whey.

(2) *From the Vegetable Kingdom.*

Infusum *Melissæ*. Balm-Tea.
Infusum *Theæ*. Common Tea.
Decoctum *Avenæ*. Gruel.
——— *Hordei*. Barley-Water.

B. DEMULCENTS.

(1) *From the Animal Kingdom.*

Acipenser Huso. Isinglas-fish.
Helix Pomatia. Garden Snail.
Physeter Macrocephalus. Spermaceti Whale.

(2) *From the Vegetable Kingdom.*

Althæa officinalis. Marshmallow.
Amygdalus communis. Almond.
Astragalus Tragacantha. Tragacanth.
Avena sativa. Oat.
Cycas Circinalis. Sago-Palm.
Glycyrrhiza glabra. Liquorice.
Hordeum distichon. Barley.
Iatropa Iamipha. Cassada Tapioca.
Lichen Islandicus. Iceland Liverwort. Iceland Moss.

Linum usitatissimum. Flax.

¶ *Malva sylvestris*. Common Mallow.

Maranta arundinacea. Indian Arrow-root.

Mimosa Nilotica. Gum Arabic.

Olea Europæa. Olive.

Orchis mascula. Salep.

Pyrus Cydonia. Quince.

Triticum hybernum. Wheat.

Tussilago Furfara. Coltsfoot.

Cera. Wax.

CLASS II.

EMOLLIENTS. A. DILUENTS.

BY Diluents we understand weak, aqueous liquors, with various impregnations. In some instances the impregnation is of a nutritious quality, as in the instance of barley-water and beef-tea, and of other vegetable and animal decoctions hereafter mentioned; in others, it is merely aromatic, as in the instance of balm tea and some other vegetable infusions.

When treating of the alimentary properties of Water (Part I. p. 106) we noticed the necessity of dilution, to a certain degree, in the business of nutrition; we may here remark, that there is an equal, if not a greater, necessity for it, in the business of healing. On how many occasions do medicines fail of their intended effect, if water be not copiously given with them? This is particularly the case with such medicines as belong to the orders of Cathartics, Diuretics, and Diaphoretics; and it is upon this principle, chiefly, that the beneficial operation of Mineral Waters is to be explained. Of such waters the mineral impregnation is often very slight; but being in a state of extreme division,

aided often by a high temperature, it produces salutary changes upon the diseased body, which could not be effected by the same mineral ingredient administered in larger quantities, but in a less diluted state. See *Saunders on Mineral Waters*, 1800.

(1) *From the Animal Kingdom.*

Jus Carnis Bubulæ. Beef-tea. See Part I. p. 17.

Jus Pullinum seu Gallinaceum. Chicken Water or Broth. Ibid. p. 34.

Serum Lactis. Whey. Ibid. p. 24.

(2) *From the Vegetable Kingdom.*

Infusum Melissæ. Balm-tea.

Infusum Theæ. Common-tea.

Decoctum Avenæ. Gruel. See Part I. p. 83.

Decoctum Hordei. Barley-Water. Ibid. p. 85.

All these preparations are of great use in fevers, and in certain morbid conditions of the intestinal canal and urinary passages; but in many of the above-mentioned cases toast and water (*Infusum panis tostii*) or even pure water will answer as well.

In the southern parts of Europe, and in the warm climates, physicians frequently allow no other beverage to their fever-patients for days and even weeks, but cold water. Though such a practice followed up, to its full extent, may not suit the ordinary fevers of this climate; yet, as we shall have occasion to remark under Refrigerants, it may be adopted in part with the greatest advantage.

To produce the desired effect it is obvious that the above-mentioned liquids must be taken in considerable quantities.

B. DEMULCENTS.

(a) *From the Animal Kingdom.*

ACIPENSER *Huso*. The Isinglas fish. Ichthyocolla. See p. 51.

HELIX *Pomatia*. The Snail. See p. 57.

¶ Sperma Ceti. Sevum Ceti. A suety substance found in a peculiar cavity existing in the head of a species of whale, termed *Physeter Macrocephalus*. It possesses all the properties of common fat and expressed oils; and, like them is incorporated with aqueous liquors by means of mucilage of gum arabic, or yolk of egg. In this state of combination it is prescribed where the alimentary canal is pained and irritated by its acrimonious contents, or the urinary passages by calculous concretions. We pass over its exhibition in pulmonary affections. Allured by its beautifully white, shining appearance and crystallized form, practitioners have, for a long period of time, given an undue preference to this species of fat; Whereas it possesses no advantage over the common expressed oils, which by reason of their fluidity are more readily combined through the intervention of mucilages) with aqueous vehicles; and which (being kept in vessels better

closed) are not so liable to become rancid and nauseating.

(2) *From the Vegetable Kingdom.*

ALTHÆA officinalis. Monadelphia Polyandria. Columniferæ. Indigenous. (Radix. Folia.) Marsh-mallow. Half an ounce of the root boiled in a pint of water to half a pint, yields a sweetish mucilaginous decoction.

The *Decoctum Althææ officinalis*, Ph. Ed. is made by boiling dried marshmallow-root four ounces, raisins stoned, two ounces, in seven pounds of water down to five pounds. The strained liquor after standing till it settles is to be poured off for use. A tea-cup full of this, and the preceding decoction, may be given in the same cases in which the almond-milk, decoction of barley and linseed infusion are prescribed. There is a *Syrupus Althææ* both in the London and Ed. Ph. It is prepared by adding to the decoction of the root a sufficient quantity of sugar. It might be dispensed with. The leaves were formerly used in decoctions for clysters and fomentations. In the Lond. Ph. the leaves of the common mallow are substituted in their place.

AMYGDALUS communis. Icosandria Monogynia. Pomaceæ. Arbor. A native of Africa, but naturalized by cultivation to the Southern parts of Europe. (*Amygdalæ dulces.*) The Almond. Sweet almonds. These kernels, freed from their skins

by maceration in hot water, yield, when properly triturated with water, a milky liquor or emulsion. In the *Lac Amygdalæ*, Ph. Lond. et Eblan. an ounce and a half of almonds, and half an ounce of double-refined sugar, are triturated with two pints of water. In the *Emulsio Amygdalæ Communis*, Ph. Ed. the blanched almonds are triturated with water alone, in the proportion of one ounce of the former to two pounds and a half of the latter. The almond emulsion prepared with gum arabic of the Ed. pharmacopœia is termed *Emulsio Mimosæ Niloticæ* (formerly *Emulsio Arabica*) and will be mentioned under the article *Mimosa*. These milky liquors constitute an useful beverage in cases of hectic fever, dysury, (whether excited by cantharides or from other causes) in stone and gravel, and in some affections of the intestinal canal. Tincture of opium is often joined with them. A tea-cupful or more may be taken for a dose.

The *Oleum Amygdalæ* may in like manner be incorporated with water by means of gum arabic or any other mucilage; also by means of alkalis. Thus combined it is given in the same cases as the almond emulsion. It is some times given in the form of a linctus, mixed up with conserves, and other saccharine and mucilaginous substances. In some cases of colic, as also where a stone is impacted in the gall duct, it may be given by itself; or only with the addition of laudanum to prevent vomiting, an effect to be guarded against in the colic. Where poisons, especially metallic poisons, have been swallowed, several tea-cups full of this oil may be given until the stomach is emptied. Lastly, it is

occasionally (though not so frequently as olive-oil, which is cheaper) added to emollient clysters.

ASTRAGALUS Tragacantha. Diadelphia Decandria. Papilionaceæ. Southern parts of Europe. Frutex. Succus gummosus e trunco et ramis stil-lans, sole aëreque exsiccatus. (Gummi tragacanthæ.) Tragacanth or Goat's-thorn. Gum-tragacanth. This gum is less soluble in water than gum arabic, and forms with it a much thicker mucilage; which on this account is better adapted for making dry substances into pills and bolusses, and for some other pharmaceutical purposes, than the arabic gum. Its medicinal uses are the same as those of the *mimosa nilotica*, which see. It is an ingredient in the *Trochisci Amyli* and *Trochisci Glycyrrhizæ*, Ph. Lond. which see under their respective heads. The *Pulvis Tragacanthæ compositus*, Ph. Lond. consists of tragacanth, gum arabic and starch, each one ounce and a half, double refined sugar, three ounces, rubbed together into a powder. Half a drachm or more may be given for a dose. It is sometimes mixed up with syrups in the form of a linctus, and prescribed in catarrhal and phthisical cases. The *Mucilago Tragacanthæ*, Ph. Lond. is made by dissolving with a gentle heat half an ounce of the gum in ten ounces of water. The *Mucilago Astragali Tragacanthæ*, Ph. Ed. is in the proportion of one ounce of the gum to eight ounces of boiling water. After macerating for twenty-four hours, the solution of the gum is promoted by trituration, and is afterwards passed through a linen strainer.

AVENA sativa. Triandria Digynia. Gramina. The oat. The decoction (called *Gruel*) prepared from the seeds freed from their husks (in which state they are termed *Groats* or *Groots*) is an useful demulcent beverage in febrile affections, in cases of cholera and dysentery, and in various disorders of the urinary passages.

CYCAS Circinalis. *C. revoluta.* Sago. See p. 97.

GLYCYRRHIZA glabra. Diadelphia Decandria. Papilionaceæ. Southern parts of Europe. (Liquiritia. Radix.) Liquorice. This sweet mucilaginous root is frequently added to decoctions of other demulcent vegetables, and given in hectic and phthisical cases. It is an ingredient in the *Decoctum Hordei compositum*, Ph. Lond. (see *Hordeum*) and in the *Trochisci Amyli*, Ph. Lond. From the *Succus Spissatus vel Extractum Glycyrrhizæ*, mixed together with an equal quantity of double refined sugar, and about a seventh part of the whole composition of gum tragacanth (with water enough to form a paste (are formed the *Trochisci Glycyrrhizæ*, Ph. Lond. formerly called *Trochisci Bechici Nigri*. Black pectoral troches. The *Trochisci Glycyrrhizæ glabræ*, Ph. Ed. are composed of extract of liquorice, gum arabic, each one part, double refined sugar two parts. These ingredients are dissolved in warm water and filtered; the liquor is then evaporated, in a gentle heat, until it becomes of a consistence proper for forming troches. These are more mucilaginous than the troches of the London Pharmacopœia, which some may deem a suffi-

cient advantage for the additional trouble incurred in their preparation. As their old name denotes, they are designed for catarrhal and phthisical cases. There are moreover in the Ed. Ph. the *Trochisci Glycyrrhizæ cum Opio*, prepared by triturating two drachms of opium with half an ounce of tincture of tolu, until the opium is dissolved, and then gradually adding eight ounces of common syrup and five ounces of extract of liquorice, softened with warm water. Whilst the whole is being well mixed together, five ounces of powdered gum arabic are to be gradually added. The mass is then to be dried till it becomes fit for making troches, of which each should weigh ten grains. These are suited to the same cases as the preceding. The mass of the *Trochisci Glycyrrhizæ comp.* Ph. Eblan. contains the same proportions of gum-arabic and opium, half the quantity of tincture of tolu, with one drachm of balsam of Peru, three drachms of tincture of myrrh and nine ounces of extract of liquorice softened in warm water. This mass is made into troches, each weighing ten grains. *Wedel de Glycyrrhiza.* 1717.

HORDEUM distichon. Triandria Digynia. Gramina. Barley. - The decorticated seeds, termed *Pearl Barley* (*Hordeum perlatum*) boiled, in the proportion of two ounces to four pints of water, until this last is reduced to two pints, yield the *Decoctum Hordei*, Ph. Lond. (*Aqua Hordeata.* Barley Water.) In the *Decoctum Hordei distichi*, Ph. Ed. the proportions are two oz. of barley to five pounds of water to be reduced by boiling to one half. In both Pharmacopœias it is directed that the barley be first

washed with cold water, and then boiled for a little while in about half a pint of water. This being thrown away, the above-mentioned quantity of boiling water is then added. It is given in unlimited quantities, in the same cases as the *Lac Amygdalæ* and *Decoctum Avenæ*.

The *Decoctum Hordei compositum*, Ph. Lond. (*Decoctum Pectorale*) is prepared by boiling in two pints of the (simple) Decoction of Barley and one pint of water, two ounces of raisins, stoned, two ounces of figs, sliced, and half an ounce of liquorice-root, sliced and bruised. The whole is boiled down to two pints, and strained. The quantity of liquorice in this preparation is too inconsiderable to be of any use. It would be an improvement, if the raisins were omitted, and a quadruple proportion of the liquorice added.—It is given in doses of a tea-cup full in phthisical and other pulmonic affections, joined with opiates to counteract its laxative effects.

Iatropa Manihot & *I. Lanipha* Tapioca. See p. 67.

LICHEN *Islandicus*. Cryptogamia Algæ.—Algæ. Iceland, Lapland, Swisserland, England, and other northern parts of Europe. (*Muscus islandicus*.) Iceland Liverwort. Iceland Moss. This like all the lichens abounds in mucilage; but at the same time it possesses a bitter principle, which should be separated from it before it is administered as a demulcent; though this principle is desirable where it is given with other intentions, as we shall have

occasion to notice under TONICS. It is freed from its bitterness by maceration in warm water for twenty hours; after which it is boiled in a fresh quantity of water, in the proportion of one ounce of the lichen to two pints of water, kept on the fire until it is reduced by evaporation to one pint. Of this a tea-cupful is given frequently in cases of hectic fever, phthisis pulmonalis, dysentery, and scurvy. *Memoires sur l'utilité des Lichens dans la Medecine, &c. par Hoffman, Amoreux et Willemet, 1788. Murray Appar. Med. Vol. v. Thesaur. Med. p. p. 123—128. 3d Edition.*

LINUM usitatissimum. Pentandria Pentagynia. Gruinales. Indigenous. (Semen) Supposed by some to have been derived from Egypt. Flax. From the seeds of this plant, called *linseed*, decoctions and infusions are prepared (in the proportion of half an ounce of the seed to a pint of water) and given in catarrhal and pleuritic affections, in strangury, in stone and gravel, and in colicky and dysenteric conditions of the intestinal canal. The decoction is likewise administered clysterwise; in which case a larger proportion of the seed may be used. To these preparations opium is frequently added. This sort of clyster is very useful in tenesmus and abrasions of the intestines. The bruised and boiled seeds are further used in poultices.—The expressed oil, called *linseed-oil* (*Oleum e seminibus lini*) possesses the same properties, and may be used in the same manner as the *oleum amygdalæ*. It has been given by itself with good effect in cases of pleurisy, peripneumony, hæmoptysis, ileus, colica pictonum, dysentery, and nephritis. In some of these cases se-

veral ounces of the oil have been taken at a dose, repeated two or three times in a day. But in ileus, and the species of colic just mentioned, the oleum ricini is preferable. *De Haen* Rat. Med. *Degner* de Dysenteria.

¶ *MALVA sylvestris*. Monadelphia Polyandria. Columniferæ. Indigenous. (Folia.) Common Mallow. The dried leaves are an ingredient in the *Decoctum pro Enemate*, Ph. Lond. formerly termed *Decoctum commune pro clystere*. In some of the foreign Pharmacopœias it enters into the decoctions for fomentations. For all medicinal purposes it is inferior to the Marshmallow; and is therefore a superfluous addition to the materia medica lists of both Pharmacopœias.

MARANTA arundinacea. Monandria Monogynia. Scitamineæ. South America, and, by transplantation, West-Indies. Indian Arrow-root. The starch prepared from the root of this plant, and sold under the name of Arrow-root powder, yields with boiling water a good mucilage, which is a common remedy in the West-Indies in diarrhœas and dysenteries. It may be occasionally flavoured with sugar, wine and spices. A tea-spoon full of the arrow-root powder will render half a pint of boiling water sufficiently mucilaginous; those who wish to make a jelly of it, may add a double quantity of the powder. See *Dr. Jas. Clark's* Account of the comparative quantities of amylaceous matter yielded by different vegetables growing in the West-India islands; in *Dr. Simmons' Med. Facts and Observations*, Vol. VII.

MIMOSA Nilotica. Polygamia Monoœcia. Lomentaceæ. Arbor. Arabia, Egypt, and Senegal. Succus gummosus e cortice trunci promanans sole æreque exsiccatus, *Gummi Arabicum* dictus. Gum Arabic. This gum affords a pure and excellent mucilage. It is applicable to various medicinal and pharmaceutical purposes. When dissolved in a proper quantity of water and duly sweetened with syrup, it forms a useful demulcent in hoarsenesses, tickling coughs and phthisis pulmonalis; as well as in diarrhœas, dysenteries, strangury, stone and gravel, and ardor urinæ. In these cases opiates are advantageously joined with it. In pharmaceutical operations, it is employed to render oils, balsams, and resins, miscible with aqueous liquors. It is an ingredient in the *Pulvis Traganthæ compositus*, Ph. Lond. which we have already noticed; and in the *Trochisci Gummosi*, *Trochisci Glycyrrhizæ Glabræ*, Ph. Ed. The latter have been already described under the article Glycyrrhiza; the former, viz. the *Trochisci Gummosi* (formerly termed *Trochisci Béchici Albi*) consist of gum arabic four parts, starch one part, double refined sugar twelve parts, all which being well rubbed together, are, with the help of a sufficient quantity of rose water, made into troches; to be given in the same cases as the *Trochisci Glycyrrhizæ* before-mentioned. The *Mucilago Arabici Gummi*, Ph. Lond. is made by dissolving four ounces of the gum in eight ounces of water; while the *Mucilago Mimosæ Niloticæ*, Ph. Ed. is prepared with one part gum arabic and two parts boiling water. In the *Mucilago Arabici Gummi*, Ph. E blan. the proportions are four ounces of the gum to nine ounces of boiling water. These inuci-

lages are, like that of the gum tragacanth, chiefly used for pharmaceutical purposes; but they may be given alone or combined with syrups and other additions, in the dose of half an ounce or six drachms. The *Emulsio Mimosæ Niloticæ*, Ph. Ed. is made by adding two ounces of the mucilage of gum arabic to two pounds and a half of the emulsio amygdalæ communis of that pharmacopœia. It is given in the same cases, and in the same doses, as the simple emulsion.

OLEA Europæa. Olive-oil. Sallad-oil. (See p. 173.) This is given alone, and variously combined, in the same cases and in the same doses as the Almond-oil. Being cheaper than the latter, it is more frequently employed in the preparation of emollient clysters, ointments and cerates.

ORCHIS mascula. Gynandria Diandria. Orchidææ. Indigenous. (*Radix Salep dicta*.) Salep. The dried pulverized root of this and several other species of orchis, gives out a pleasant mucilage to boiling water. The proportions should be half an ounce of the former to a quart of the latter. This has been administered with good effect in diarrhœa, dysentery, strangury, stone and gravel, hectic fever, and phthisis pulmonalis. A stronger mucilage or jelly is sometimes prepared, by steeping one drachm of the dried root in four ounces of hot water, and afterwards squeezing it through a cloth strainer. This may be sweetened and aromatized at pleasure. *Percival's Essays and Lind on Diseases incidental to Europeans in Hot Climates.*

¶ *PYRUS Cydonia*. Icosandria Pentagynia. Pomaceæ. Arbor. Cultivated in Northern Europe, but a native of Crete. (Semen. *Cydoniorum Semen*.) Quince-seed. From the seeds of this fruit hot water extracts a mucilage; which being in no respect different from other mucilages already described, may well be dispensed with. There is in the new Pharmacopœia of the London College a *Mucilago Cydonii*. One drachm of the seeds is directed to be boiled gently in eight ounces of water for ten minutes, and then strained. The mucilages of gum arabic and gum tragacanth render this quite superfluous.

TRITICUM hybernum. Triandria Digynia. Gramina. Supposed to have been introduced from Sicily. (Tritici Semen, Amylum ex eodem præparatum) Wheat and starch prepared therefrom. Dissolved in hot water, starch yields a strong mucilage, which is advantageously administered by the mouth and per anum in diarrhœas and dysenteries. As a mucilage it is likewise serviceable in phthisical and hectic cases. Hence it is an ingredient in the *Trochisci Amyli*, Ph. Lond. and in the *Trochisci Gummosi*, Ph. Ed. The latter have been already described; the former consist of starch one ounce and a half, liquorice-root six drachms, iris-root half an ounce, double-refined sugar a pound and a half. All these ingredients being rubbed together into a powder are to be made into troches by means of mucilage of tragacanth. The iris, as the College suggests, may be omitted. The *Mucilago Amyli*, Ph. Lond. is made by triturating three drachms of starch with a pint of water, and afterwards boiling

for a short time. The *Mucilago Amyli*, Ph. Ed. is prepared (in the same manner) with half an ounce of starch to a pound of water. This mucilage is used clyster-wise in diarrhœas and dysenteries. To such clysters laudanum is often advantageously added. *Cartheuser de Amylo*.

TUSSILAGO *Farfara*. Syngenesia Polygamia Superflua. Compositæ Discoideæ. Indigenous. (Folia et Flores) Coltsfoot. A decoction of this herb has, on account of its mucilaginous properties, been recommended in catarrhal and phthisical cases. (*Thesaur. Med.* p. 123); also in scrophulous ulcerations. *Fuller Med. Gymnastica*.

CERA. Wax. This substance is collected from the antheræ and other parts of vegetables, by bees. It therefore properly belongs to the vegetable products.

It is given internally in cases of obstinate diarrhœa and dysentery, combined, by means of soap, with aqueous and mucilaginous liquors, so as to form a sort of emulsion. *Thesaur. Med.* p. 120.

TABULAR VIEW
OF
THE CONTENTS OF CLASS III.

ABSORBENTS.

(1) *From the Animal Kingdom.*

Ammonia ejusque præparata. Volatile Alkali and its preparations.

Cornu Cervi ustum. Burnt Hartshorn.

Cancer Pagurus. The Crab.

¶ Isis nobilis. Red Coral.

Ostrea edulis. The Oyster.

Spongia officinalis. Spunge.

(2) *From the Vegetable Kingdom.*

Kali præparatum. Ph. Lond. Carbonas Potassæ, Ph. Ed.
Alkali Vegetabile Mite, Ph. Ebl. Prepared Kali. Carbonate
of Potass. Mild Vegetable Alkali.

AQUA KALI præparati, Ph. Lond. Lixivium Mite, Ph. Ebl.
Water of prepared kali. Mild Ley.

(3) *From the Mineral Kingdom.*

¶ Bolus Gallicus. French Bole.

Bolus Armenus. Armenian Bole.

Terra Lemnia. Lemnian Earth.

Calx viva. Quick-lime.

Creta ejusque præparata. Chalk and its preparations.

Magnesia. Magnesia.

Natron præparatum, Ph. Lond. Carbonas Sodæ, Ph. Ed. Alkali
Fossile Mite, Ph. Eblan. Prepared Natron. Carbonate
of Soda. Mild Fossil Alkali.

CLASS III.

ABSORBENTS.

THE substances which belong to this class, are especially adapted to such disorders of the stomach and intestinal canal, as proceed from, or are connected with, acidity in those parts. Hence they are frequently prescribed in the diarrhœas of children and old people. It should be remarked, however, that much abuse prevails in regard to their exhibition in the diseases of children; where complaints are often aggravated rather than relieved by them. There is even reason to suspect, that they sometimes lay the foundation for mesenteric obstructions and other visceral mischief. In like manner they not unfrequently prove hurtful in the dysenteric affections of adults, in consequence of being given at too early a period of such attacks; thereby causing to be pent up and retained what ought to come away. Hence, in the administration of medicines of this class, more judgment and circumspection are required than is generally imagined. The common error is, to begin with them too soon, and to continue them too long.

(1) *From the Animal Kingdom.*

AMMONIA *præparata*, Ph. Lond. *Carbonas Ammoniaë*, Ph. Ed. *Alkali Volatile Mite*, Ph. Eblan. Prepared Ammonia. Carbonate of Ammonia. Mild Volatile Alkali. (See p. 236). From five to twelve grains of this alkaline salt, joined with ten or fifteen grains of pulverized ginger, are sometimes given, in aqueous vehicles, in gouty acidities of the stomach. In similar cases, and in some convulsive disorders of children connected with acidity of the primæ viæ, are prescribed the *Aqua et Spiritus Ammoniaë*, Ph. Lond. *Aqua Carbonatis Ammoniaë*, Ph. Ed. *Liquor Alkali Volatilis*, Ph. Eblan. (p. 237 and 238). The former is given to adults in doses of thirty to fifty drops; to children, in doses of three to six drops: of the latter (viz. the spiritus ammoniaë) half the before-mentioned quantities will generally suffice. In similar cases and doses may be exhibited the *Liquor Volatilis Cornu Cervi*, Ph. Lond. et Ebl. From the *Cornu Cervi Ustum*, Ph. Lond. *Phosphas Calcis*, Ph. Ed. *Cornu Cervinum ustum*, Ph. Eblan. (Burnt Hartshorn) is prepared the *Decoctum Cornu Cervi*, Ph. Lond. (formerly called *Decoctum Album*.) Two ounces of burnt hartshorn and six drachms of gum arabic, are boiled in three pints of water down to a quart, the decoction being constantly stirred. Of the strained liquor a tea-cupful may be taken at pleasure in diarrhœas attended with acidity and acrimony of the intestinal canal. The *Cornu Cervi Ustum* is an ingredient in the *Pulvis Opiatus*, Ph. Lond. which consists of one part puri-

fied opium, and nine parts burnt hartshorn. Dose, from five to ten grains. It is given, like the Decoctum Cornu Cervi, in diarrhœas.

CANCER *pagurus*. Insecta Aptera. In the European seas. (Chelæ Cancrorum) Crabs' Claws. The Claws are prepared for medicinal use by pulverization, levigation, ablution with hot water, and subsequent exsiccation upon chalk, blotting paper being interposed between the levigated claws and the chalk. Dose, half a drachm or more, in the same cases as the Creta Præparata, which see. They are the principal ingredients in the *Pulvis Chelarum Cancri compositus*, Ph. Lond. which consists of Crabs' claws one pound, chalk and red coral, each three ounces. Dose, half a drachm or two scruples. The coral is a superfluous ingredient in this composition. It should be thrown out, and a double quantity of chalk substituted in its place.

¶ *Isis nobilis*. Vermes Zoophyta. Mediterranean. (Corallium Rubrum.) The Red Coral. Crabs' claws render this an unnecessary addition to the list of the materia medica; and it will doubtless be expunged from the London Pharmacopœia, on the next revision of that work.

OSTREA *edulis*. Vermes Testacea. In the European Seas. (Ostreum. Testa.) The Oyster. Its shell is prepared in the same manner, and given in the same doses, as the chelæ cancri. The one may be indifferently used for the other, and perhaps there is no occasion for both. The calcined

shells have been recommended by some physicians for the preparation of lime-water ; but for this purpose they deserve no preference over common quick-lime.

SPONGIA officinalis. Vermes Zoophyta. Mediterranean. Burnt sponge (*spongia usta*) seems to owe its beneficial operation (inostly slight and uncertain) in scrophulous disorders, partly to its alkaline and partly to its carbonaceous nature. Perhaps the first-mentioned property may contribute to the solution and diffusion (in the human body) of its coally matter. It is given (made into a bolus or lozenge) in doses of a scruple or half a drachm, twice a day. *Thesaur. Med.* p. 289. What would be the effect of larger doses joined with a small quantity of opium, to prevent purging ? *Hufeland* makes a lixivium of it, and joins bitters and narcotics with it.

(2) *From the Vegetable Kingdom.*

KALI præparatum, Ph. Lond. *Carbonas Potassæ*, Ph. Ed. *Alkali Vegetabile Mite*, Ph. Eblan. Prepared Kali. Carbonate of Potass. Mild Vegetable Alkali. Dissolved in water, this alkaline salt has been administered with good effect in acidities of the stomach and intestinal canal, and in convulsive affections therewith connected. In the last-mentioned cases it is joined with opium, and applied also externally in the form of a bath. (*Stutz* in *Hufeland's Journal*, and in the *Medical and Physical Journal*, Vol. v.) In the same manner this

alkali has been given with success to rickety children. (*Thesaur. Med.* p. 134.) In larger doses it is often successfully employed when acid and mineral poisons have been swallowed. The carbonated solution of it (*Aqua Super-Carbonatis Potassæ*, Ph. Ed. *Liquor Alkali Vegetabilis Mitissimi*, Ph. Eblan.) is an efficacious remedy in calculous complaints. This, however, belongs rather to the class of DIURETICS. In the disorders above-mentioned the *Kali præparatum* (carbonas potassæ) may be given to children in doses of from one to five grains, dissolved in mucilaginous and saccharine liquors; to adults in doses of five to fifteen grains. When combined with carbonic acid, as in the above mentioned preparation, a larger quantity of the kali (for instance a scruple) may be given at a time. For the same purposes as the salt itself, may be used the *Aqua Kali Præparati*, Ph. Lond. (*Lixivium Mite*, Ph. Eblan.) which is nothing more than the kali brought into a state of deliquescence, or fluidity by exposure in a damp place; but as the strength of this is apt to vary, it is perhaps better to use definite quantities of the prepared kali and water in its place. Dose, to adults, fifteen or twenty drops in any appropriate vehicle.

AQUA KALI Puri, Ph. Lond. *Aqua Potassæ*, Ph. Ed. *Lixivium Causticum*, Ph. Eblan. This is obtained by depriving prepared kali (carbonate of potass) of its carbonic acid, by means of quick-lime and water, and afterwards filtrating the liquor. In the London formula there are six parts of quick-lime to four of the alkali; in the Ed. and Dublin eight of the former to six of the latter. In the London formula a

gallon of water is directed to every pound of the alkali. The whole quantity of water employed in the Ed. formula gives nearly the same proportion; but it is not added to the quick-lime and alkali all at once, part of it being poured upon the filter to wash away from the lime all the remaining pure alkali. This lixivium, when duly prepared, excites no effervescence on being mixed with acids.

The Aqua Kali Puri was formerly much employed in calculous disorders. From ten to forty drops were given in gruel, milk, or broth, twice or thrice a day; but even in these doses it has often proved highly injurious, when long continued, to the organs of digestion. Hence it has been properly superseded by the carbonated solution of kali, (*aqua supercarbonatis potassæ*) before-mentioned. *Home on Solvents*, 1783.

(3) *From the Mineral Kingdom.*

¶ *BOLUS Gallicus*. French Bole coincides in its properties with the *Creta Præparata*, which see. Perhaps this article of the *materia medica* might be dispensed with; for it is doubtful whether the argillaceous earth, which enters into its composition, possesses any peculiar agency, distinct from that of the cretaceous absorbents. The *Terra Lemnia*, a species of bolar earth, and *Bolus Armena* are equally obsolete with the above. In consequence of the oxyd of iron with which some of these earths abound, they have been supposed to exert an astringent operation, and hence have been em-

ployed in chronic diarrhœas, and dysenteries. See ASTRINGENTS. *Gmelin Apparatus Medicaminum*, Vol. I.

CALX. Lapis Calcareus purus recens ustus, Ph. Lond. *Calx viva*, Ph. Ed. *Calx recens usta*, Ph. Eblan. Lime. Quick-lime. Fresh burnt Lime. This is employed for the preparation of the *Aqua Calcis*, Ph. Lond. Ed. et Eblan. (Lime Water). This is made (according to the directions of the Lond. college) by adding twelve pints of hot water to half a pound of quick-lime, and then stirring them about; after standing together in a covered vessel for an hour, the liquor is poured off [from the sediment] and kept in a vessel [closely] stopped. The Edinburgh college direct the same quantity of lime to be slaked with four ounces of water, to which, while yet warm, twelve pounds of water are afterwards added, the vessel being well shaken. When the lime has settled to the bottom it is to be agitated again with the water, and this is to be repeated about ten times, taking care that the vessel be constantly closed, so as to keep away the external air. Lastly, the water is to be filtered through blotting-paper placed in a funnel, with glass rods interposed between the paper and funnel, that the water may filter off as quickly as possible; it is to be kept in bottles well stopped. The Dublin college direct 1lb. of fresh-burnt lime to be first sprinkled with 1lb. of boiling water, and afterwards to be mixed with 12lbs. of water (the vessel being frequently shaken) and the water to be afterwards filtered through blotting paper, and kept in bottles well stopped. This is a solution of *pure* or *de-*

carbonated calcareous earth in water, as *Dr. Black* first shewed. It is given in doses of a quarter of a pint, or even half a pint, in acidities of the stomach and intestinal canal; in diarrhœa and dysentery; in diabetes; in fluor albus, and in calculous affections; in which last, however, it has been superseded by the aqua mephitica alkalina. It is also prescribed in scrophulous, phthisical and cancerous cases. It is sometimes mixed with an equal quantity of warm milk; at other times it is given in combination with bitters, astringents and light aromatics. *Cartheuser* de Aquæ Calcis vivæ usu interno, 1743. *Girtanner* de Terra Calcareæ cruda et calcinata, 1782. *Vogel* de Curatione Cancri per Aquam Calcis vivæ, 1769. *Whytt* on the Virtues of Lime-Water, 1752. *Alston's* Dissertations on Quicklime and Lime-Water, 1754.

CRETA præparata, Ph. Lond. *Carbonas Calcis præparatus*, Ph. Ed. This is chalk levigated, washed and afterwards dried in the same manner as the chelæ cancrorum. From fifteen grains to a drachm are given for a dose in the same cases as crabs' claws and the other earthy absorbents. The *Pulvis Cretæ compositus*, Ph. Lond. is composed of chalk six parts, cinnamon four parts, tormentil and gum arabic, each, three parts, pepper, $\frac{1}{32}$ part of the whole. Dose, from fifteen grains to half a drachm, in diarrhœas, (especially those which occur in the advanced stage of low fevers) and other disorders of the intestinal canal. In prescribing this and the other preparations of chalk in dysenteries, the precautions mentioned at the head of this class of medicines should not be neglected. The *Pulvis Car-*

bonatis Calcis compositus, Ph. Ed. consists of carbonate of lime four ounces, nutmeg half a drachm, cinnamon a drachm and a half. It is given in the same cases, and in the same doses, as the preceding. The *Pulvis Cretæ compositus cum Opio*, Ph. Lond. is made by adding a drachm and a half of opium to eight ounces of the compound powder of chalk. From fifteen grains to two scruples may be given for a dose. Two scruples contain nearly a grain of opium. It is applicable to the same cases as the preceding preparations. The *Trochisci Cretæ*, Ph. Lond. (formerly called *Tabellæ Cardialgicæ*) consist of chalk four ounces, crabs' claws two ounces, fine sugar three ounces, cinnamon half an ounce, formed into troches by means of mucilage of gum arabic. One of these is dissolved in the mouth now and then in cases of heart-burn, gouty flatulence, &c. The *Trochisci Carbonatis Calcis*, Ph. Ed. consist of chalk four ounces, gum arabic one ounce, nutmeg one drachm, fine sugar six ounces, formed into troches with a sufficient quantity of water. The *Mistura Cretacea*, Ph. Lond. (formerly called *Julepum e Creta*) is compounded of chalk one ounce, double refined sugar six drachms, gum arabic one ounce, water two pints. Dose, one or two ounces, in acidities of the stomach and bowels, and in the colliquative diarrhœas, which occur in hectic and phthisical cases. Small quantities of tincture of opium are often usefully joined with it. The *Mist. Cretacea*, Ph. Eblan. is compounded of chalk $\frac{1}{2}$ ounce, fine sugar 3 drachms, gum arabic 1 ounce, water 15 ounces. The *Potio Carbonatis Calcis*, Ph. Ed. (formerly *Potio Cretacea*) is made by gradually

mixing by trituration, one ounce of carbonate of lime, half an ounce of fine sugar, and two ounces of mucilage of gum arabic, with two pounds and half of water, and two ounces of spirit of cinnamon. Dose, four spoonfulls occasionally. In the same cases as the *Mistura cretacea*.

MAGNESIA usta, Ph. Lond. et Eblan. *M. alba*, Ph. Lond. et Eblan. *Magnesia, et Carbonas Magnesiae*, Ph. Ed. This earthy substance is frequently prescribed for the removal of complaints connected with acidity of the stomach and bowels, to which children are especially liable. To these it is given in doses of ten or fifteen grains in any appropriate vehicle, joined sometimes with rhubarb, sometimes with opium. To adults it is given in doses of half a drachm to a drachm. In larger quantities it proves purgative. See *CATHARTICS*. The *Trochisci Magnesiae*, Ph. Lond. are composed of calcined magnesia four ounces, refined sugar two ounces, ginger one scruple, made into a paste with mucilage of gum arabic. They are given in the same manner, and in the same cases, as the chalk-troches.

NATRON præparatum, Ph. Lond. *Carbonas Sodæ*, Ph. Ed. *Alkali Fossile Mite*, Ph. Eblan. Prepared Natron, Carbonate of Soda. Mild Fossil Alkali. Solutions of this alkaline salt in common water afterwards super-saturated with the carbonic acid or fixed air, (the proportions of water and salt being the same as those of the vegetable fixed alkali in the common alkaline water,) are prescribed with great success under the name of *acidulous soda*

water. (*Aqua Super-Carbonatis Sodæ*, Ph. Ed.) in calculous complaints. In situations where these solutions cannot be prepared or cannot be purchased, the natron may be used in the form of pills in the manner described at p. 232.

TABULAR VIEW
OF
THE CONTENTS OF CLASS IV.

REFRIGERANTS.

(1) *From the Vegetable Kingdom.*

CITRUS *medica*. The Lemon.

OXALIS *Acetosella*. Wood-sorrel.

ACETUM, Ph. Lond. *Acetum Vini*, Ph. Eblan. *Acidum Acetosum*, Ph. Ed. Vinegar. Wine-Vinegar. Acetous acid.

KALI *acetatum*, Ph. Lond. *Acetis Potassæ*, Ph. Ed. *Alkali Vegetabile Acetatum*, Ph. Eblan. Acetated Kali. Acetite of Potass. Acetated Vegetable Alkali.

KALI *nitratum*. *Nitrum*, Ph. Lond. et Eblan. *Nitras Potassæ*, Ph. Ed. Nitrated Kali. Nitre. Nitrate of Potass.

TARTARI CRYSTALLI, Ph. Lond. et Eblan. *Supertartris Potassæ*, Ph. Ed. Crystals of Tartar. Supertartrite of Potass.

(2) *From the Mineral Kingdom.*

AQUA *frigida*. Cold Water.

ACIDUM *muriaticum*, Ph. Lond. Ed. et Eblan. Muriatic Acid.

ACIDUM *vitriolicum*, Ph. Lond. et Eblan. *Acidum sulphuricum*, Ph. Ed. Vitriolic Acid. Sulphuric Acid.

PLUMBI *preparata*. Preparations of Lead.

ZINCUM *vitriolatum*, Ph. Lond. *Sulphas Zinci*, Ph. Ed. *Vitriolum Album*, Ph. Eblan. Vitriolated Zinc. Sulphate of Zinc. White Vitriol.

CLASS IV.

REFRIGERANTS.

(1) *From the Vegetable Kingdom.*

ACETUM *distillatum*, Ph. Lond. et Eblan. *Acidum Acetosum distillatum*, Ph. Ed. Distilled Acetous Acid. Distilled Vinegar. This, in common with other acids, moderates the excessive heat in febrile disorders, when duly diluted with water. An ounce added to a quart of spring of water, with or without sugar, forms, in these cases, a pleasant beverage (the *oxycraton* and *posca* of the ancients) which may be drank in large quantities, according to the desires of the patient. Vinegar may also be employed clysterwise, mixed with an equal quantity of water. For other observations on vinegar, see ANTISEPTICS.

The *Kali acetatum*, Ph. Lond. *Acetis Potassæ*, Ph. Ed. *Alkali Vegetabile Acetatum*, Ph. Eblan. Acetated Kali, Acetite of Potass. Acetated Vegetable Alkali, is employed for the same purposes, dissolved in water, in the proportion of two drachms to a pint. A tea-cup full may be taken at pleasure. In the preparation of what are termed *Saline Draughts*, a scruple or half a drachm of prepared kali, is saturated with half an ounce or six drachms

of vinegar, and afterwards diluted with water and sweetened with a proper quantity of syrup. For this purpose, however, lemon-juice is preferable, where it can be procured.

CITRUS medica. Polyadelphia Icosandria. Pomaceæ. Arbor. Asia; and by transplantation in the Southern parts of Europe. (Limon.) The Lemon. The juice of this fruit is among the most grateful of the vegetable acids. Like vinegar it may be given freely to quench thirst and diminish heat in fevers, diluted in the same manner with water, and rendered palatable with the addition of sugar. This is what is termed *Lemonade*. The juice is also employed in the same manner as the acetous acid or distilled vinegar, for the preparation of the *effervescing* or *saline draughts* before mentioned, and of which examples may be seen in the *Thesaur. Med.* p. 136. See ANTISEPTICS.

KALI nitratum. *Nitrum*, Ph. Lond. et Eblan. *Nitras Potassæ*, Ph. Ed. (See p. 229.) Nitrated Kali. Nitrate of Potass. Nitre. This neutral salt is frequently prescribed, with good effect, for abating heat and thirst in febrile diseases. Fifteen grains or a scruple may be given for a dose, in the form of a powder triturated with sugar, or dissolved in a sufficient quantity of water, and sweetened with syrup, so as to form a julep. It is in inflammatory disorders that this salt has been found useful, such as acute rheumatism, (*Brochelsby's* Observations on Army Diseases,) mania, pulmonary hæmorrhage, &c. Of late, indeed, some attempts have been made with it in typhus-fever, but a medicine which

lowers the pulse is little suited to such cases. In hæmoptoe and other hæmorrhages, it may be given either in the form of a bolus combined with rose- conserve, or dissolved in infusion of roses (un-acidulated) in the form of a mixture or draught. (*Dickson Med. Observations and Inquiries*, Vol. IV. and *Gibbon's Medical Cases*.) The *Trochisci Nitri*, Ph. Lond. consist of nitre 4 ounces, fine sugar 1 pound, tragacanth 6 drachms, and a sufficient quantity of water. The *Trochisci Nitratis Potassæ*, Ph. Ed. are compounded of nitrate of potass 1 part, fine sugar 3 parts, made into a proper form with mucilage of gum tragacanth. The *Spiritus Ætheris nitrosi*, Ph. Lond. et Ed. *Liquor Æthereus Nitrosus*, Ph. Eblan. (see p. 229,) may, in like manner, be employed as a refrigerant in febrile and inflammatory disorders, in doses of forty or sixty drops, diluted with water. *Hoffmann de Nitro, ejusque Natura et Usu in Medicina*, 1698. *Cartheuser de Amplissimo Nitri Usu Medico*, 1747.

CRYSTALLI TARTARI, Ph. Lond. et Eblan. (*Tartarum purificatum*.) *Super-tartris Potassæ*, Ph. Ed. (See p. 230.) Crystals of Tartar. Super-tartrate of Potass. Two drachms of this salt dissolved in a quart of hot water with a proper quantity of sugar, and afterwards suffered to get cold, forms a pleasant cooling beverage (called *Imperial*) in fevers.

(2.) *From the Mineral Kingdom.*

AQUA frigida. Water, considered in relation to its chemical composition and decomposition, belongs

strictly to none of the three kingdoms of nature; but as all water, except that which is distilled, contains more or less of mineral substances dissolved in it, and as spring water is the water here intended, it may properly enough be ranged under the present head.

From the remotest times to the present day, *Cold Water* has been resorted to as the simplest, and most efficacious refrigerant in inflammatory and febrile disorders. In the ardent and malignant fevers of hot climates, physicians allow their patients to drink it in unlimited quantities; and the Italian practitioners trust almost entirely to it in such cases. It is scarcely necessary to remark that this treatment cannot be carried to so great a length in the fevers of this country. Cold water is also of eminent service in pulmonary and uterine hæmorrhages. *Lanzani* Manner of using Cold Water (in Italian) 1717. *Hancocke* and *Cyrillus*, as quoted hereafter.

At the same time that cold water is administered internally in the fevers above-mentioned, it is likewise applied externally, *under certain restrictions*, with great advantage. It has been employed in this manner in the Yellow Fever of the West-Indies and America; and the reports of many British practitioners concerning the result of this practice, during the late war, are much in its favour. Nor has this application been confined to the countries just mentioned; for *Dr. Wright* and *Dr. Currie* have reaped equal benefit from ablution with cold water in the common contagious fevers of this climate. Its salutary effects in these cases depend upon its being

applied early during the first week, and only when the temperature of the skin is equal to or above the natural temperature, and feels at the same time harsh and dry. The water is thrown upon the patient's naked body from a bucket, and this is repeated at noon and in the evening. It is seldom necessary to continue it beyond two days.

This treatment, it is evident, is better suited to the army and navy, and to public hospitals, than to private practice. It is also better suited to the warmer regions, than to this climate, where pulmonary and other visceral affection is so frequently complicated with the fevers above-mentioned; a complication which would be aggravated by such treatment.—Spunging the patient's body briskly with *tepid* water (the evaporation of which produces a refrigerating effect) is a method of abstracting febrile heat, which, in this country, is more likely to be generally adopted. *Hancocke* Febrifugum Magnum; or Common Water the best Cure for Fevers, 1722. *Hoffmann* de Aquæ frigidæ salubritate, 1729. *Cyrillus* on the Use of Cold Water in Fevers, in Phil. Trans. Vol. XXXVI. *Floyer* Psychrolusia, 1702. *Wright* in Lond. Med. Journal, Vol. VII. and in Med. Facts, Vol. VII. *Currie's* Reports on the Effects of Water, 1798.

Cold water is an useful application in phlegmonous inflammations; and in cases of burns and scalds, when applied immediately after the accident, it has been found to abate the pain and prevent inflammation more effectually than any other remedy. See *Earle* on Burns, 1800. It is proper, however,

to remark that where a very large extent of surface has been burnt, stimulant applications should be resorted to.

PLUMBUM. Lead. Solutions of some of the oxyds of this metal in the acetous acid, when duly diluted with water, are frequently applied externally to remove inflammation. Thus by boiling the semi-vitreous oxyd of lead, termed lithargyrus, in vinegar, is obtained the *Aqua Lithargyri acetati*, Ph. Lond. *Liquor Lithargyri acetati*, Ph. Eblan. (formerly called *Extractum Saturni*.) A drachm or two mixed with about a pint of water, forms an embrocation in general use. In the *Aqua Lithargyri acetati composita*, Ph. Lond. *Liquor Lithargyri acetati compositus*, Ph. Eblan. (which is similar to the famous Goulard-Water) there are a drachm of the water of acetated litharge, and a drachm of proof spirit of wine, to a pint of distilled water. From late observations, however, it would appear, that cold water alone answers, in most cases, as well as these compound metallic solutions.—In like manner solutions of the *Cerussa acetata*, Ph. Lond. et Eblan. *Acetis Plumbi*, Ph. Ed. (*Saccharum Saturni*), a salt formed by the union of the white oxyd of lead, (termed cerusse) with the acetous acid, may be employed as embrocations, in bruises and external inflammations. (See ASTRINGENTS.) This saline preparation may also be combined with fatty substances, so as to form an ointment, of which there is a specimen in both our Pharmacopœias, under the title of *Unguentum Cerussæ Acetatæ*; for cautions respecting the use of which ointment, and other preparations of lead, see *Thesaur. Med.* p. 140

The titles *Aqua lithargyri acetati* and *Aqua lithargyri acetati composita* are exceptionable. The last epithet would seem to imply an increase of strength or activity, whereas the compound water is really a much weaker preparation than the simple water. Might not the first be termed *Solutio lithargyri acetosa*, and the last *Solutio lithargyri acetosa diluta*?

ZINCUM vitriolatum, Ph. Lond. *Sulphas Zinci*, Ph. Ed. *Vitriolum album*, Ph. Ebl. *Vitriolated Zinc*. Sulphate of Zinc. White Vitriol. A salt formed by the union of oxyd of zinc with the vitriolic acid. (sulphuric acid.) Solutions of this metallic salt are frequently employed as embrocations, injections, and collyria. (*Thesaur. Med.* p. 165—167). See ASTRINGENTS.

TABULAR VIEW
OF
THE CONTENTS OF CLASS V.

ANTISEPTICS.

(1) *From the Animal Kingdom.*

AMMONIA *muriata*. *Sal Ammoniacus*, Ph. Lond. et Eblan.
Murias Ammoniacæ, Ph. Ed. Muriated Ammonia. *Sal Am-*
moniac. Muriate of Ammonia.

(2) *From the Vegetable Kingdom.*

ACETUM *distillatum*, Ph. Lond. et Eblan. *Acidum Acetosum*
distillatum, Ph. Ed. Distilled Vinegar. Distilled Ace-
 tous Acid.

ACETUM *aromaticum*. Aromatic Vinegar.

ACETUM *camphoratum*. Camphorated Vinegar.

ACETUM *nitrosum*. Nitrous Vinegar.

ANTHEMIS *nobilis*. Chamomile.

ARISTOLOCHIA *Serpentaria*. Virginia Snake-root.

ARNICA *montana*. Leopard's Bane.

ARTEMISIA *Abrotanum*. Southernwood.

ARTEMISIA *Absinthium*. Common Wormwood.

¶ ARTEMISIA *maritima*. Sea Wormwood.

CINCHONA *officinalis*. Peruvian Bark.

CITRUS *medica*. The Lemon.

DAUCUS *Carota*. Carrot.

DORSTENIA *Contrayerva*. Contrayerva.

HORDEUM *vulgare*. Barley. Malt.

LAURUS *Camphora*. Camphor.

HUMULUS *Lupulus*. The Hop.

MYRRHA. Myrrh.

OXALIS *Acetosella*. Woodsorrel.

PAPAVER somniferum. The White Poppy. Opium.

PINUS Larix. Larch-tree. Turpentine.

PRUNUS spinosa. Sloe.

RIBES nigrum. Black Currant.

RTA graveolens. Rue.

CARBO lignarius. Charcoal.

GAS ACIDUM carbonicum. Carbonic acid Gas. Fixed Air.

FERMENTUM Cerevisiæ. Yeast.

CEREVISIA. Malt Liquor.

VINUM. Wine.

SPIRITUS Vini. Spirit of Wine.

(3) *From the Mineral Kingdom.*

AQUA frigida. Cold Water.

ACIDUM muriaticum et oxymuriaticum. Muriatic and oxymuriatic Acid.

ACIDUM vitriolicum. Ph. Lond. et Eblan. *Acidum Sulphuricum*, Ph. Ed. Vitriolic Acid. Sulphuric Acid.

ARGILLA vitriolata. Alumen, Ph. Lond. et Eblan. *Sulphas Aluminæ*, Ph. Ed. Vitriolated Argill. Alum. Sulphate of Alumina.

ARGENTUM nitratum, Ph. Lond. et Eblan. *Nitras Argenti*, Ph. Ed. Nitrated Silver. Nitrate of Silver.

CUPRUM acetatum. *Ærugo*, Ph. Lond. et Eblan. *Subaceticus Cupri*, Ph. Ed. Acetated Copper. Verdigris. Subacetite of Copper.

CUPRUM vitriolatum, Ph. Lond. et Eblan. (Vitriolum Cæruleum) *Sulphas Cupri*, Ph. Ed. Vitriolated Copper. (Blue Vitriol) Sulphate of Copper.

¶ *NATRON boracicum*. Borax, Ph. Lond. et Eblan. *Boras Sodæ*, Ph. Ed. Boracicated natron. Borax. Borate of Soda.

ACIDUM nitricum. Nitric Acid.

CLASS V.

ANTISEPTICS.

(1) *From the Animal Kingdom.*

AMMONIA *muriata*. Sal Ammoniacus, Ph. Lond. et Ebl. *Murias ammoniæ*, Ph. Ed. Muriated Ammonia. Sal Ammoniac. Muriate of Ammonia. A salt compounded of the volatile alkali and muriatic acid. It is given by some practitioners internally in malignant fevers, in doses of ten or thirty grains, dissolved in the camphorated mixture, bitter infusions or decoction of cinchona; but it is more frequently used in gargles and external applications.

(2) *From the Vegetable Kingdom.*

ACETUM, Ph. Lond. *Acetum Vini*, Ph. Eblan. *Acidum acetosum*, Ph. Ed. Vinegar. Acetous Acid. (See p. 317). This may be used in the manner described in the preceding class. It is frequently added to gargles. It may also be advantageously combined with aromatics, as in the instance of the *Acetum aromaticum*, Ph. Ed. which is made by infusing rosemary, sage, lavender, and cloves, in distilled acetous acid. A tea-spoon full,

diluted with water, may be given for a dose.—It is moreover used as an odorament.—In some of the foreign Pharmacopœias there is an *Acetum Camphoratum*, which is made by dissolving camphor in spirit of wine and then adding it to the vinegar. Dose, the same as that of the aromatic vinegar. It is in like manner used for smelling to. Vinegar boiled with honey to the consistence of a syrup (*oxymel*) is used in gargles and lotions.—By others it has been combined with nitre; and such a mixture or solution (*Acetum nitrosum*) is said to be remarkably efficacious in the scurvy. (*Patterson on the Scurvy*, 1795. *Rollo on Diabetes*, 1798.) It would seem that the vinegar is the principal agent, as nitre alone is not beneficial in this disease. (*Trotter's Essays*.) When vinegar is employed to fumigate sick-rooms, it should be boiled in glazed earthen pipkins and carried about the bed, but not thrown upon hot bricks or coals, or heated metallic utensils, by which it is decomposed.

ANTHEMIS nobilis. (Chamæmelum. Herba et Flores.) Chamomile. (See p. 170.) This herb and its flowers are employed in decoctions for antiseptic fomentations and clysters. It is an ingredient in the *Decoctum pro Fomento*, Ph. Lond. (formerly termed *Fotus Communis*) which is made by boiling an ounce of dried chamomile, dried wormwood, and dried southernwood, and half an ounce of dried bay-leaves in six pints of water. Two species of artemisia are surely not needful in this decoction. The wormwood (in a double proportion) without the southernwood, or the southernwood without the wormwood, would suffice. The *Decoctum pro ene*,

mate, Ph. Lond. (formerly called *Decoctum commune pro Clystere*) belongs to EMOLLIENTS. The *Decoctum Anthemidis Nobilis*, Ph. Ed. (formerly *Decoctum Commune*) is made by boiling, for one quarter of an hour, one ounce of dried chamomile-flowers and half an ounce of carraway-seeds in five pounds of water. This is used clysterwise in quantities of a pint or more, alone or with various additions. The *Decoctum Chamæmeli*, Ph. Eblan. is made by boiling $\frac{1}{2}$ oz. of dried chamomile-flowers and 2 drachms of sweet fennel seeds in 1 pound of water.—For other remarks on this bitter vegetable and its preparations, see TONICS.

ARISTOLOCHIA Serpentaria. (*Serpentaria Virginiana*.) Virginia Snake-Root. (See p. 240.) Decoctions and infusions of this root, either alone or in combination with the Peruvian bark, are frequently prescribed in the advanced stages of low and malignant fevers. The proportions and doses have been already mentioned at p. 230, under DIAPHORETICS; where also notice is taken of the uses and doses of the tincture.

ARNICA montana. Leopard's bane. See STIMULANTS.

ARTEMISIA Abrotanum. Syngenesia Polygamia æqualis. Compositæ Discoideæ. Frutex. Southern parts of Europe. (*Abrotonum*. *Folia vel summitates*.) Southernwood. Decoctions of the tops of this bitter-aromatic shrub are frequently used as fomentations in cases of bad ulcers and gangrenous affections. It is an ingredient in the *Decoctum pro*

Fomento, Ph. Lond. as mentioned under the article *chamomile*.

ARTEMISIA *Absinthium*. Class and order as the preceding. (*Absinthium*.) Common Wormwood. Employed, like the southernwood, in antiseptic fomentations.

¶ ARTEMISIA *maritima*. Class and order as above. (*Absinthium maritimum*.) Sea Wormwood. Used in the same manner as the common wormwood; and is an ingredient in the *Decoctum pro Fomento*, Ph. Lond.—There is no use in swelling the catalogue of the materia medica with two species so similar in their sensible qualities and medicinal effects. One of the two, the *artemisia absinthium*, or this species, should be expunged. For other remarks on this vegetable and its preparations, see TONICS and ANTHELMINTICS.

CINCHONA *officinalis*. Pentandria Monogynia. Contortæ. Arbor. Peru. (*Cortex Peruvianus*.) Jesuit's bark. Peruvian bark. In petechial and other malignant fevers, in the ulcerous angina and in gangrenous affections, the powder, decoction, and tincture of this bark, are given with good effect, joined with acids, port-wine, camphor, and opium. It may also be administered clysterwise in these cases, and particularly to children labouring under the confluent small pox accompanied with a typhoid condition of the system. (*Thesaur. Med.* p. 150.) For an account of the preparations and doses of this valuable article of the materia medica,

see ASTRINGENTS and TONICS, under which classes its other and more general uses will be noticed.

CITRUS medica. (Limon.) The Lemon. (See Refrigerants.) The acid juice of this fruit is given in conjunction with the camphorated mixture, decoction of cinchona, and other antiseptics, in malignant fevers, the ulcerous angina, and gangrenous affections. (*Thesaur. Med.* p. 144.)—Added to red port-wine and water, it forms a useful beverage (called *Negus*) in all such cases.—The *Succus Limonis Spissatus*, Ph. Lond. duly diluted with water, supplies the place of the fresh juice.—Repeated trials have proved that the acid juice of the lemon is antiscorbutic in a very high degree. In consequence of the testimonies produced in its favour by various physicians and surgeons, it has become a standing remedy in our Navy. The recent juice, alone, or sweetened with sugar (and in some cases mixed with port-wine) may be given in the quantity of many ounces in the space of twenty-four hours. If it excites diarrhœa, astringents and aromatics must be joined with it. Where the fresh juice cannot be procured, the crystallized citric acid (prepared by saturating the filtrated juice with chalk, and afterwards adding to the washed precipitate vitriolic acid, according to the processes of *Scheele* and *Dizé*.—See *Fourcroy* *Système des Connaissances Chimiques*, Tom. VII.) may be employed in its place. *Lind* on the Scurvy, 1754. *Blane's* Diseases of Seamen, 1789. *Trotter* on the Scurvy, 1792; and his *Medicina Nautica*, 1797 and 1799.

CITRUS Aurantium. Class and order as above.

(*Aurantiam hispalense*.) The Seville Orange. The juice of this may be given in scorbutic cases in the same manner as the juice of the lemon. For its Conserve, Tincture, and Syrup, see TONICS.

DAUCUS Carota. (See p. 66.) The Carrot. Poultices made of the scraped root have been applied with good effect to ill-conditioned ulcers.

DORSTENIA Contrayerva. (See p. 242.) *Contrayerva*. This is given alone or in combination with the bark and acids, in typhus and other malignant fevers; as mentioned in the place above referred to.

HORDEUM vulgare. (See DEMULCENTS.) Barley. *Maltum vel Malta*. Malt. The infusion termed *Wort* was formerly much used as an antiscorbutic in the Navy; but of late years it has given place to the superior agency of the lemon juice or citric acid. It is a great objection to the use of *Wort*, that it aggravates the diarrhœa with which scorbutic patients are often harassed. *Macbride's New Method of Treating the Scurvy*, 1767, and his *Experimental Essays*, 1764.

LAURUS Camphora. (See p. 244.) Camphor. This resinous substance, of which the preparations and doses have been already mentioned at the place above referred to, has been often successfully employed in petechial and other malignant fevers (*Riverius—Hoffmann—Huxham—Pringle*) and in gangrenous affections; in which last it is used exter-

nally as well as internally (*Collin* Observationes circa Morbos.) In these cases it is combined with the Peruvian bark, wine, and acids. (*Thesaur. Med.* p. 141.) It has also been administered clysterwise with the best effect to children labouring under the confluent small pox accompanied with a typhoid state of the system. *Buchner* de Usu Cort. Peruv. cum Camphora remixt. in Febribus ex putredine ortis, 1762.

HUMULUS Lupulus. Diœcia Pentandria. Scabridæ. Indigenous. (*Lupulus. Coni.*) The Hop. Poultices made of the dried blossoms or cones, macerated in water, have lately been applied to ill-conditioned and gangrenous ulcers, with very good effect. *Trotter's Med. Nautica*, Vol. II. *Duncan's Annals of Medicine*, Vol. II. For other observations on the medical uses of the hop, see *TONICS*.

MYRRHA. (See p. 276.) Myrrh. Solutions of this gum-resin in spirit of wine (see *Tinctura Myrrhæ*, p. 276) are frequently employed in lotions for foul ulcers, and in gargles against the gangrenous sore throat. In the last-mentioned cases its more volatile particles may be conveyed to the fauces along with the vapour of hot water or vinegar. *Thesaur. Med.* p. 148.

OXALIS Acetosella. Decandria Pentagynia. Grinales. Indigenous. (*Lujula. Folia.*) Woodsorrel. The juice of this plant abounds in a peculiar acid termed the oxalic; which, like the citric, is powerfully antiscorbutic. The *Conserva Lujulæ*, Ph. Lond. (Conserve of Woodsorrel) is prepared by

bruising the leaves in a marble-mortar, and then beating them together with thrice their weight of double-refined sugar. A tea-spoon full or more may be given occasionally.—The expressed juice may be taken in the same manner as lemon-juice. What is termed the *Essential Salt of Woodsorrel* (obtained from the expressed juice by filtration, evaporation and crystallization) is not pure oxalic acid, but an acidulous salt (like the crystals of tartar) composed of the vegetable alkali supersaturated with the acid of sorrel. Half an ounce of this salt dissolved in fourteen or sixteen ounces of hot water, duly sweetened, forms, when cold, a pleasant and useful beverage in malignant fevers.—The pure oxalic acid which is identical with the acid of sugar, is not used in medicine. *Savary de Sale Essentiali Acetosellæ*, 1773. *Fourcroy* *Système des Connaissances Chimiques*, Tom. vii.

PAPAVER somniferum. (Sec NARCOTICS.) The White Poppy. Its inspissated juice, called Opium, is given freely, in conjunction with the Peruvian bark and wine, in cases of sphacelation. It is prescribed in more moderate doses in malignant fevers, combined with spices (as in the instance of the *Confectio Opiata*, Ph. Lond.) or dissolved in spirit of wine, (as in the *Tinctura Opii*, Ph. Lond. et Ed.) and added to decoctions of cinchona, contrayerva, and serpentaria, or to camphorated mixtures. But for observations on these and other opiate preparations, the reader is referred to NARCOTICS.

PINUS Larix. Monœcia Monadelphica. Coni-

feræ. Arbor. Mountainous parts of Europe. (Terebinthina Veneta) The Larch-tree. Succus resinosus ex arbore sauciata promanans, *terebinthina* dictus. Venice turpentine is the juice which flows from incisions made in the trunk of the aforesaid tree. It is applied externally by the surgeons in foul ulcers and gangrenous affections; as well as its distilled oil (*Ol. Terebinthinæ*, Ph. Lond. et Ed.) commonly called Spirit of Turpentine; which is obtained by distilling the turpentine with somewhat more than an equal quantity of water.—Yellow resin (*Resina flava*) is the substance which remains after this distillation; and is much used in antiseptic ointments and cerates. For other remarks on turpentine see STIMULANTS.

PRUNUS spinosa. The Sloe. See ASTRINGENTS.

RIBES nigrum. The Black Currant. See ASTRINGENTS.

¶ *Ruta graveolens*. Decandria Monogynia. Multisiliquæ. Southern parts of Europe. (Herba.) Rue. An infusion of this herb in vinegar was formerly in much esteem as an antiloimic, but is now justly disregarded as such. It has also been employed in fomentations to gangrenous ulcers; but as it possesses no superiority over chamomile or wormwood for these purposes, it may well be erased from the catalogue of the materia medica.

CARBO lignarius. (Carbonium) Charcoal. Carbon. Charcoal duly prepared from wood, and reduced to fine powder, has been applied to foul ul-

cers and mortified parts with apparent advantage. The powder may be mixed up with boiled bread and milk, and applied in the form of a poultice. *Crell's Chemical Journal* (English Translation) Vol. III. and *Dr. Simmons' Medical Facts and Observ.* Vol. VII.

GAS ACIDUM Carbonicum. Aër fixus. Gas Mephiticum. Carbonic Acid gas. Fixed Air. Mephitic Air. This elastic fluid is obtained for medicinal purposes by pouring vitriolic acid upon chalk or marble. The gas thus extricated may be combined with water (pure or with additions) by means of an apparatus, in common use, invented by Nook. Water thus impregnated with the carbonic acid gas is prescribed with good effect to patients labouring under typhus and other malignant fevers. It may be drank in the same quantities as pure water.—Much of the efficacy of the acidulous soda water depends upon its saturation with this air; which is likewise a principal agent in the saline effervescing draughts (being extricated from the prepared kali on the admixture of vinegar or lemon-juice) and in all fermented bottled liquors, when in a sparkling state. Besides being taken in these ways into the stomach, it has also been frequently drawn into the lungs in certain diseases of that organ, and particularly in the advanced stage of phthisis pulmonalis. (*Percival's Essays*, Vol. I.) In this disorder, however, it has disappointed expectation in some late trials. Externally it has been applied to foul and cancerous ulcers with temporary good effect. (*Ewart's two Cases of Cancer*, 1794.) But even here it seems to act merely as a palliative. Whatever effi-

cacy the Fermenting-Cataplasm possesses, it is wholly to be ascribed to this gas which is gradually evolved from it.

FERMENTUM Cerevisiæ. *Spuma cerevisiæ fermentantis.* *Flos cerevisiæ fermentantis.* Yest or Barm. Within these few years this substance has been cried up as an excellent remedy in malignant fevers. Various testimonies have been produced for and against its antiseptic virtues. At present the evidence on both sides is nearly equal; it is therefore a matter which must lie over for future decision. It is given internally in doses of a table-spoon full, mixed with water, porter, or wine and water. [In the last case, how much may be owing to the Wine!] Externally it has been applied to foul ulcers in the form of a cataplasm. It seems to promise more success as an outward than as an inward remedy. Whatever may be its effects, they are to be ascribed partly to the carbonic acid and partly to the bitter principle of the hop which it contains. See *Beddoes's Considerations on Factitious Airs*, and *Medical and Physical Journal* for 1800 and 1801.

CEREVISIA. Malt liquor. (See Part I. p. 111) Fresh table beer, spruce beer, porter and bottled beer, are good antiscorbutics, and are besides often administered in low and malignant fevers, with the best success. It is only when they have too laxative an effect that their use in such cases becomes improper.

VINUM. Wine. (See Part I. p. 112) In the advanced stage of typhus, ulcerated angina, and

in mortifications, Port Wine is perhaps the most powerful of all antiseptics. In such disorders it may be given to the quantity of several pints, alone or acidulated with lemon juice, within the space of twenty-four hours. Rhenish and Claret are preferable to Port Wine in many of these cases.—Perry and Cider, which may be considered as weaker sorts of wine, may be employed more freely for the same purposes.—In the fevers above-mentioned it is a proof that wine and other fermented liquors agree, if, during their use, the tongue becomes more moist, the skin more soft, and the pulse less frequent and more full, and the affection of the brain more moderate. Where the contrary effects are observed, they should be diminished or discontinued.

SPIRITUS vini. (See p. 114) Spirit of Wine. Brandy (*Sp. Vini Gallicus*) is sometimes employed internally in the last stage of petechial fevers, gangrenous sore throats, and in the black-vomiting of the yellow-fever; in which last it is perhaps more to be relied upon than any other medicine; but in the common low and malignant fevers of this country it is seldom advisable to exhibit it otherwise than in a state of dilution with water and admixture with acids, as in the state of Punch; a liquor which may in some measure supply the place of wine. Externally spirit of wine is employed, alone or combined with camphor, as an embrocation and fomentation in bruises and mortification.

(3) *From the Mineral Kingdom.*

AQUA frigida. In malignant and pestilential fevers Cold Water, employed internally and externally, in the manner and with the cautions mentioned under Refrigerants, proves a most powerful antiseptic. When mixed with vinegar, it is, in the opinion of some practitioners, still more efficacious, as an external application.

ACIDUM muriaticum, Ph. Lond. Ed. et Eblan. (Spiritus Salis Marini.) Muriatic Acid. Obtained by mixing together sea-salt (muriate of soda) and vitriolic acid (sulphuric acid) diluted with a proper quantity of water, and afterwards subjecting the mixture to distillation. In this process the vitriolic acid unites with the alkaline basis of the sea-salt, disengaging the muriatic acid which passes over into the receiver. This acid, added to water in such quantities as render it pleasantly sharp to the taste, affords an useful medicine in typhus and other malignant fevers; but we must not imagine with a modern German physician, Professor *Reich*, that this, and the other mineral acids are, without the aid of other agents, adequate to the cure of all fevers. They are even hurtful in some conditions of fever. It may likewise be prescribed in gargles in the cynanche gangrænosa. For these purposes however does it possess any advantages over the vitriolic acid? (*Fordyce* on the Virtues of Muriatic Acid in the cure of putrid diseases; 1789.) The muriatic acid vapour, extricated from sea-salt by pouring strong vitriolic acid upon it, is often employed for fumigating the apartments of those who

have laboured under infectious fevers. (*Johnstone* on the Power of the Mineral Acid Vapours to destroy Contagion, 1803.) The oxygenized muriatic acid vapour, or oxy-muriatic acid vapour (obtained by mixing the black oxyd of manganese with sea salt, and subjecting them to a moderate degree of heat before the vitriolic acid is added) answers still better for the fumigating process than the common muriatic acid vapour. See *Guyton-Morveau* Moyens de Desinfecter l'Air, 1801, and *Rollo's* Account of the Artillery Hospital at Woolwich, 1801. These vapours must be carefully avoided by those who are employed in the fumigation.

ACIDUM vitriolicum, Ph. Lond. et Eblan. *Acidum Sulphuricum*, Ph. Ed. (*Oleum Vitrioli*) Vitriolic Acid. Sulphuric Acid. Obtained either by distilling exsiccated sulphate of iron (*ferrum vitriolatum*) or by the combustion of sulphur. This acid is employed in malignant fevers, ulcerated angina, and confluent small-pox, diluted with water, in the same manner as the muriatic acid; but it is more frequently mixed with decoctions of cinchona, angustura, contrayerva, &c. It is also employed in gargles. Dose of the diluted acid (*Acidum vitriolicum dilutum*, Ph. Lond. et Eblan. *Acidum Sulphuricum dilutum*, Ph. Ed.) twenty or forty drops.—The *Acidum sulphuricum aromaticum*, Ph. Ed. (formerly called *Elixir vitrioli acidum*) is made by mixing gradually six ounces of sulphuric acid with two pounds of alcohol, and digesting in a gentle heat for three days; afterwards adding an ounce and a half of cinnamon, and one ounce of ginger, and digesting again for six days; then filtering. Dose,

thirty or sixty drops, in water, decoction of cinchona, &c.—*Spiritus Ætheris vitriolici*, Ph. Lond. *Æther Sulphuricus cum Alcohole*, Ph. Ed. (formerly called *Spiritus vitrioli dulcis*.) see p. 269. Sixty or eighty drops of this preparation may be given for a dose. (joined with camphor or other aromatics) in malignant fevers. See *Carmichael Smyth* in *Med. Communications*, Vol. I. Also on the *Jail Distemper*, 1795.

CUPRUM acetatum. *Ærugo*, Ph. Lond. et Ebl. *Sub-Acetis Cupri*, Ph. Ed. Acetated Copper. Verdigris. Sub-Acetate of Copper. In this metallic preparation the oxyd of copper is not completely saturated with the acetic acid. It is employed by the Surgeons to cleanse foul ulcers. *Oxymel Æruginis*, Ph. Lond. (formerly called *Mel Ægyptiacum*) is made by dissolving one ounce of verdigris in seven ounces of vinegar, then adding fourteen ounces of honey, and boiling the whole to a proper consistence. It is applied to aphthæ and other ulcerations. In the Ed. Ph. there is an *Ung. Sub-Acetitis Cupri*, which is applied to foul sores, and to ulcerated conditions of the eyes and eye-lids. It is compounded of one part sub-acetite of copper and 15 parts resinous ointment.

CUPRUM vitriolatum. Ph. Lond. et Eblan. *Sulphas Cupri*, Ph. Ed. (*Vitriolum cœruleum*.) Vitriolated Copper. Sulphate of Copper. A salt compounded of oxyd of copper and vitriolic acid. Solutions of this metallic salt are employed as lotions to foul ulcers.

¶ NATRON *boracicum*. Borax, Ph. Lond. et Eblan. *Boras Sodæ*, Ph. Ed. consists of boracic acid supersaturated with natron or soda. It is therefore a sub-borate of soda. It was formerly much employed in lotions against aphthous affections of the mouth and tongue, combined with honey or honey of roses; but for this purpose it is inferior to alum or vitriolated zinc; and is therefore now seldom prescribed.

ACIDI *nitrici vapor*. Nitric acid vapour, extricated from pounded nitre (*nitras potassæ*) by pouring upon it vitriolic acid (sulphuric acid) is employed for fumigating hospitals and sick-rooms, in the same manner as the muriatic acid vapour, and oxy-muriatic acid vapour. N. B. In this mode of fumigation, as well as in that of the muriatic acid, glazed earthen pipkins or gallipots should be employed. See *Smyth's Account of Experiments made on board the Union Hospital-Ship, 1796*. Also on Nitrous Fumigation, 1799.

TABULAR VIEW
OF
THE CONTENTS OF CLASS VI,

ASTRINGENTS.

N. B. Several of the articles here enumerated cannot in strict propriety of language be termed astringents, but are inserted amongst such medicines for the reason assigned at page 344.

(1) *From the Animal Kingdom.*

ACIPENSER *Huso*. Isinglas-fish.

CORNU CERVI *ustum*. Burnt Hartshorn.

(2) *From the Vegetable Kingdom.*

¶ ÆSCULUS *Hippocastanum*. Horse Chestnut.

¶ ARBUTUS *Uva Ursi*. Bear's Whortleberry.

CINCHONA *officinalis*. Peruvian Bark.

CYCAS *Circinalis*. Sago-Palm.

HÆMATOXYLIUM *campechianum*. Logwood.

JUGLANS *regia*. Walnut.

KINO. *Kino*.

MARANTA *arundinacea*. Indian Arrow-root.

MIMOSA *Catechu*. Catechu.

PAPAVER *somniferum*. White Poppy. Opium ejusque præparata. Opium and its preparations.

¶ POLYGONUM *Bistorta*. Bistort.

PRUNUS *spinosa*. Sloe.

PTEROCARPUS *Draco*. Dragon's Blood.

PUNICA *Granatum*. Pomegranate.

QUASSIA *Simarouba*. Simarouba.

QUERCUS *Cerris*. Small prickly cupped Oak.

- GALLÆ. Gallnuts.
 QUERCUS *Robur*. Common Oak.
 ROSA *Gallica*. Red Rose.
 SALIX *alba*. White Willow.
 SALIX *fragilis*. Fragile Willow.
 SALVIA *officinalis*. Sage.
 ¶ SYMPHYTUM *officinale*. Comfrey:
 TORMENTILLA *erecta*. Tormetil.

(3) *From the Mineral Kingdom.*

- ARGILLA *vitriolata*. Alumen, Ph. Lond. et Eblan. *Sulphas*
Aluminæ, Ph. Ed. Vitriolated Argill (Alum). Sulphate
 of Alumina.
 BOLUS *Gallicus*. French Bole.
 CRETÆ *præparata*. Preparations of Chalk.
 PLUMBI *quædam præparata*. Preparations of Lead.
 ZINCUM *vitriolatum*, Ph. Lond. *Sulphas Zinci*, Ph. Ed. Vi-
 triolum Album, Ph. Eblan. Vitriolated Zinc. Sulphate
 of Zinc. White Vitriol.

CLASS VI.

ASTRINGENTS.

SOME of the following substances (such as the ichthyocolla and cornu cervi among the animal; sago and arrow-root among the vegetable; chalk and bole among the mineral substances) do not strictly belong to this class, being destitute of the astringent principle: but as they are frequently employed for restraining alvine and other profluvia, and in that respect co-incide with the genuine astringents; it was thought right to insert them here, referring for observations upon them to their respective places under DEMULCENTS and ABSORBENTS.

(1) *From the Animal Kingdom.*

ACIPENSER *Huso*. The Isinglas Fish. (See Demulcents.) Ichthyocolla. Jellies made by boiling this substance in milk or water, sweetened and aromatized, are useful in cases of chronic diarrhoea.

CERVUS *Elaphus*. The Stag. (Cornu Cervi. See p. 306). Jelly prepared from the rasped horns is

sued to the same cases as the preceding.—The decoction of the burnt bones possesses similar properties, and is especially useful where a lax state of the intestines proceeds from, or is accompanied with, acidity. See ABSORBENTS.

(2) *From the Vegetable Kingdom.*

The number of astringent vegetables is so great, that the bare catalogue of them would occupy a large portion of an octavo volume. We shall therefore content ourselves with noticing very few besides those which have a place in the Pharmacopœias of the London, Edinburgh, and Dublin colleges.

¶ *ÆSCULUS Hippocastanum.* The Horse Chestnut. See TONICS.

¶ *ARBUTUS Uva Ursi.* Decandria Monogynia. Bicornes. Frutex. Indigenous. (Folia.) Bear's Whortleberry. About thirty years ago this plant was held in high esteem as a remedy in calculous and nephritic complaints, and was particularly extolled by the celebrated *de Haen* of Vienna. Since that time its doubtful efficacy in the majority of such cases has caused its reputation to dwindle away, and it is now rarely, if ever, prescribed in this country. Dose of the powder from fifteen grains to half a drachm. It is also given in infusions. *De Haen Ratio Medendi*, Vol. I. II. and III. *Murray Commentatio de Arbutu Uva Ursi*, 1765, and reprinted in Vol. I. of his *Opuscula*. It has lately been re-

commended in the incipient stage of pulmonary consumption by *Dr. Bourne* of Oxford.

CINCHONA officinalis. (see p. 329.) Peruvian Bark. The decoction of this bark, combined with alum and other astringents, is often employed in cases of hæmorrhage, diabetes and fluor albus. See TONICS.

CYCAS Circinalis. The Sago-Palm. See DEMULCENTS.

HÆMATOXYLUM campechianum. Decandria Monogynia. Lomentaceæ. Arbor. West-Indies. (*Lignum Campechianum. Lignum campechense.*) Logwood. This is a pleasant and useful astringent in cases of obstinate diarrhœa, and in the advanced stages of dysentery. A decoction may be prepared by boiling the wood in water; but the Extract is preferred by most practitioners dissolved in peppermint-water, or cinnamon-water, and given in the form of draughts or a mixture. (*Thesaur. Med.* p. 159.) It may also be administered clysterwise. Dose of the extract from fifteen grains to half a drachm, or more. It is to be impressed on the minds of young practitioners, that this and the other astringents hereafter mentioned, are highly improper in the early periods of dysenteric affections; it is only in the protracted stage that they are useful. In this respect the preliminary observations to the class Absorbents will apply here. See also the sixth and seventh chapters of *Zimmerman's Treatise* on the Dysentery.

JUGLANS regia. Monoëcia Polyandria. Amnatiaceæ. Arbor. Persia, but naturalized to the tem-

perate parts of Europe. (Fructus immaturus. Putamina Nucum viridia.) The Walnut. A decoction made by steeping an ounce of the green outer shells of the fruit for three or four hours in a pint of water, then boiling the whole together for a quarter of an hour and straining, has been applied with good effect, by means of lint or compresses of fine rag wet therewith, to fungous and other ulcers. (Transactions of the Josephine Academy at Vienna, Vol. I.) For other remarks on this fruit and its preparations, see ANTHELMINTICS.

KINO. Gummi rubrum astringens Gambiense. (Resina.) Kino. The red astringent gum. The red gum of Gambia. This resin, improperly called a gum, is frequently and successfully employed in diarrhœas, fluor albus, and uterine hæmorrhages, in doses of fifteen to thirty grains, diffused by means of mucilage with aqueous and aromatic liquors. In the Edinburgh Pharmacopœia there is a combination of it with alum under the title of *Pulvis Sulphatis Aluminæ compositus* (formerly *Pulvis Stypticus*.) It consists of sulphate of alumina four parts, kino one part. Dose, fifteen grains to half a drachm, in pulmonary and uterine hæmorrhages. It is also an ingredient in the *Electuarium Catechu*, Ph. Ed. See *Mimosa catechu*. The *Tinctura Kino*, Ph. Ed. et Eblan. is made by digesting for eight days two ounces of kino in a pound and a half of diluted alcohol. Dose, one or two drachms mixed up with aqueous liquors by means of mucilage. *Fothergill* in *Med. Obs. and Inquiries*, Vol. I. and reprinted in his Works.

MARANTA *arundinacea*. Indian Arrow-root. See DEMULCENTS.

MIMOSA *Catechu*. Polygamia Monœcia. Lomentaceæ. Arbor. East Indies. (Catechu. Extractum Catechu. Succus spissatus Terra Japonica dictus.) The inspissated gummi-resinous juice of this tree, called by the inappropriate name of terra japonica, is one of the most valuable medicines of the astringent-class, and is frequently employed, with the best success, in the same cases as the kino. Being less stimulant than the last-mentioned resin, it is better suited to the majority of hæmorrhagic cases, as well as to some species of alvine fluxes. It is equally useful in gleets and fluor albus; nor has it been wanting of efficacy in diabetes. In the form of a dentifrice or collutory, it has been employed with advantage in scorbutic affections of the gums and mouth. By reason of the mucilaginous and extractive matter which it contains, it is miscible *per se* with aqueous liquors. It is given in doses of one or two scruples. The *Electuarium Mimosæ Catechu*, Ph. Ed. (formerly called *Confectio Japonica*) is composed of catechu four ounces, kino three ounces, cinnamon and nutmeg, each one ounce, opium (softened with white wine) one drachm and a half, syrup of red roses (boiled to the consistence of honey) two pounds and a quarter. Dose, two scruples to a drachm and a half, in diarrhœas, and in the advanced stages of dysentery. The *Elect. Catechu comp.* Ph. Eblan. is composed of catechu 4 ounces, cinnamon and nutmeg, each 1 ounce, kino 3 ounces, opium (softened with white wine) 1 drachm and $\frac{1}{2}$, syrup of ginger and syrup of orange-

peel, (boiled to the consistence of honey) each 14 ounces, tincture of tolu 2 drachms. Dose, the same as of the preceding. The *Infusum Mimosæ Catechu*, Ph. Ed. (formerly called *Infusum Japonicum*) is made by macerating two drachms and a half of catechu, and half a drachm of cinnamon, in seven ounces of boiling water, for a couple of hours; then filtering and adding one ounce of simple syrup. Dose, two or three table-spoons full, occasionally. The *Tinctura Catechu*, Ph. Lond. (formerly called *Tinctura Japonica*) is made by digesting, for ten days, three ounces of catechu, and two ounces of cinnamon, in a quart of proof spirit. The *Tinctura Mimosæ Catechu*, Ph. Ed. is made by digesting for eight days the same quantities of catechu and cinnamon, in two pounds and a half of diluted alcohol. Dose of either tincture 1 or 2 drachms, incorporated by means of mucilage with common water, cinnamon-water, peppermint-water, camphor-mixture, &c.—The tincture, as Professor Murray has remarked, is the least useful of all its preparations.—Kerr in Vol. V. of Med. Obs. and Inquiries. Murray de Catechu, 1779, and reprinted in Vol. II. of his Opuscula.

PAPAYER *somniferum*. (See NARCOTICS.) The White Poppy. The exsiccated juice called Opium, and the Tincture, are frequently employed alone and in combination with absorbents, astringents, and aromatics, (see *Pulvis Opiatus*, and *Pulvis Cretæ compositus cum Opio* under ABSORBENTS; and *Confectio Opiata* under NARCOTICS) in alvine fluxes, in diabetes, and in uterine and pulmonary hæmorrhages; in which last, however, it is obvious that aromatic

additions to it are highly improper. In cholera, and in the symptomatic diarrhœas which occur in the advanced stage of malignant fevers, the different forms of opiates are eminently useful by restraining the inordinate evacuations, and thereby preventing the dangerous consequences that would otherwise follow from debility and exhaustion. They are likewise serviceable in certain stages of dysentery; in which, however, their premature exhibition has often been productive of great mischief. *Sir John Pringle* has remarked, that opiates should never be given in dysentery until the patient has had sufficient evacuations, otherwise by confining the morbid cause, they aggravate all the symptoms. *Sir George Baker* found them not advisable in this disorder until the stools became nearly of their natural consistence. *Dr. Donald Monro* observed in his practice that when administered in the first period of dysentery, opiates generally checked the alvine discharge too suddenly and strongly, whence the tormina and fever were increased. He, therefore, waited till the bowels had been well evacuated, and then prescribed them only in moderate doses, (chiefly at night) so as to alleviate pain and procure some sleep; but never in such quantities as to induce stupor, or entirely restrain the flux. (See *Zimmerman* on the Dysentery, Chap. VII. where similar precautions are adduced from other celebrated practitioners.) Joined with alum and the extract of cinchona, opium is advantageously employed in diabetes; and in combination with vitriolated zinc and digitalis, in uterine and pulmonary hæmorrhages.

¶ POLYGONUM. *Bistorta*. Octandria Trigynia.

Oleraceæ. Indigenous. (Bistorta. Radix.) Bistort.—The root of this plant has long held a place in the Pharmacopœias of the London and Edinburgh colleges. It undoubtedly possesses considerable astringency; but by no means more than several other vegetables of this class, and even less than some of them. It may therefore be deemed superfluous.

PRUNUS *spinosa*. Icosandria Monogynia. Pomaceæ. Frutex. Indigenous. (Prunus sylvestris. Fructus.) The sloe. The fruit of this shrub is a cooling, powerful, astringent; and accordingly the conserve (*Conserva Pruni sylvestris*, Ph. Lond.) prepared by mixing its pulp with thrice its weight of fine sugar, is occasionally employed for checking diarrhœas. Infusions are also sometimes prepared from the conserve and employed as gargles, in cases of angina, and scorbutic affections of the gums.

PTEROCARPUS *Draco*. Diadelphia Decandria. Papilionaceæ. South America and the East-Indies. Arbor. (Succus resinosus Sanguis Draconis dictus ex arbore incisa promanans soleque exsiccatus.) Dragon's blood. The dark red substance which goes under the name of Dragon's blood, is said to be obtained from other trees besides this; as well as from a species of the Rattan cane, *Calamus Rotang*, (see *Murray's Apparatus*, Vol. v. p. 301, and *Woodville's Med. Bot.* Vol. III. p. 475) growing in Cochinchina, Malacca, and other parts of the East-Indies. It is of a resinous nature, but according to *Dr. Duncan's* experiments (Edinb. New Dispensatory) it is without astringency. Nevertheless, it is

said to have been prescribed with advantage in laxities of the intestinal canal, in fluor albus, and in cases of hæmorrhage. But in the first mentioned disorders, it is inferior to catechu and kino. Dose, fifteen or twenty grains. From an opinion, which seems to rest on a very slight foundation, it has for a great length of time been used externally, in the composition of healing and strengthening plasters. It is one of the ingredients in the *Emplastrum Thuris compositum*, Ph. Lond.

PUNICA Granatum. Icosandria Monogynia. Pomaceæ. Arbor. Southern parts of Europe. (*Granatum*. Flores *Balaustia dicti*; nec non cortex Fructus.) The Pomegranate. The flowers, called *Balaustines*, and the rind of the fruit, are powerfully styptic. Decoctions prepared from the flowers and rind (*Thesaur. Med.* p. 161) have sometimes been prescribed for restraining the colliquative diarrhœa and sweats which accompany hectic fever; but they are more frequently and perhaps more properly employed in the form of injections and gargles, in cases of leucorrhœa and angina.

QUASSIA Simarouba. *Simarouba*. See TONICS.

QUERCUS Cerris. Monoecia Polyandria. Amnataceæ. Arbor. Southern parts of Europe and the Levant. (*Gallæ*, nidi seu domicilia insectorum ex *Cynipidis* genere. *Gallæ turcicæ*.) The small prickly cupped Oak. Gallnuts, which are the nests or habitations of insects belonging to the genus *cynips*, are found upon the common oak as well as upon this species; but as those which are imported

from Aleppo, and which are collected from the *quercus cerris*, are what (being deemed the best) are met with in the shops; it appeared right to notice them apart under this article. Although these excrescences, improperly termed nuts, are the covering or abodes of insects, yet they are of a vegetable nature, and derive the whole of their astringency from the oak itself. Of all astringent substances, Gallnuts are the most powerful. They are generally considered as too rough to be taken into the stomach; though authorities are not wanting for their employment internally against agues and other disorders. According to *Dr. Cullen*, they may be safely given in combination with gentian and other bitters; but the remark made on this subject by *Murray* (*Apparatus Med.* Vol. vi. p. 9) appears to us very judicious; viz. that we should be cautious of using such strong astringents as the present in the treatment of intermittents, since they only suspend for a while, instead of completely removing the disorder, and are apt to lay the foundation for visceral obstructions. — With more propriety are Gallnuts prescribed in infusions for injections and gargles; and it is said that one part of the pulverized nuts mixed up with eight parts of hog's lard (*Thesaur. Med.* p. 164.) forms an useful application against the blind piles.

QUERCUS Robur. Class and order the same as above. Indigenous. (Cortex.) The Common Oak. Like other astringent vegetable substances, oak-bark has been employed for the cure of intermittent fevers, diarrhœa, and fluor albus; but in regard to its internal exhibition in these and other

disorders, the caution thrown out above on the subject of galls, will in a great measure apply here. By combining it, indeed, with bitters (*Thesaur. Med.* p. 154) and perhaps with a small quantity of opium, the mischief to be apprehended from its strong stypticity may, in some degree, be counteracted. Let us not however deceive ourselves with the idea that, by such modes of combination, we can render the bark of this tree equally efficacious as a febrifuge and a tonic with the Peruvian bark; yet it has been termed the Cinchona of Europe. (*Helvig de Quinquina Europæorum*, 1712.) Decoctions of oak-bark are employed as injections in uterine hæmorrhages and leucorrhœa; and as gargles in anginous affections of the uvula and tonsils; in the last of which cases alum is an useful addition. (*Thesaur. Med.* p. 165.)

Rosa gallica. Icosandria Polygynia. Senticosæ. Southern parts of Europe. Frutex. (*Rosa rubra*. Petala.) The Red Rose. By maceration in hot water the petals, or leaves of the blossoms, yield a pleasant lightly astringent liquor, which is frequently prescribed (with the addition of the vitriolic acid, and a few drops of tincture of opium) in pulmonary and uterine hæmorrhages, and in the colliquative sweats of phthisis pulmonalis and hectic fever. And, by way of gargle, with the addition of alum in cases of sore throat. (*Thesaur. Med.* p. 166.) Of itself it is not sufficiently powerful for re-training alvine fluxes; but in such affections the unacidulated infusion may be employed, when combined with the extract of cinchona, or with catechu or kino.—The *Infusum Rosæ*, Ph. Lond. (formerly

called *Tinctura Rosarum*) is made by macerating half an ounce of the dried petals in two pints and a half of boiling water, for half an hour, and adding, while the infusion is going on, three drachms of diluted vitriolic acid. When cold, the liquor is filtered, and sweetened with an ounce and a half of white sugar. N. B. This infusion should be prepared either in glass or china vessels.—Half an hour appears to be too short a time for the maceration. The *Infus. Rosarum*, Ph. Eblan. is similar to that of the Lond. pharmacopœia, except that 3lbs. of water are directed instead of 2 and $\frac{1}{2}$ pints. The *Infus. Rosæ Gallicæ*, Ph. Ed. is made by macerating for 4 hours 1 oz. rose-petals in 5lbs. boiling water, then adding 1 drachm sulphuric acid, and after straining the liquor, 2 oz. of white sugar. These preparations are given internally in doses of two or three ounces; and are used topically as gargles, in the cases before mentioned.—The *Conserva Rosæ*, Ph. Lond. Ed. et Ebl. is made by beating up the petals with a sufficient quantity of refined sugar; and is employed, in combination with nitre, or alum, or catechu, and a few drops of tincture of opium, in hæmorrhages from the lungs and uterus. Dose, half a drachm or two scruples. (See REFRIGERANTS.) The *Mel Rosæ*, Ph. Lond. et Ebl. (formerly *Mel rosaceum*) is obtained by macerating for six hours, in three pints of hot water, four ounces of the petals; then straining the liquor and adding to it five pounds of clarified honey, and boiling the whole to the consistence of a syrup. It is added to gargles, and lotions for the mouth, in cases of sore throat and aphthæ.—The *Syrupus Rosæ Gallicæ*, Ph. Ed. is used chiefly for colouring juleps and mixtures. It is otherwise with

the syrup of the damask rose (*Syr. Rosæ*, Ph. Lond. and *Syr. Ros. Centifoliæ*, Ph. Ed.) which is given to children as a laxative, in doses of three or four drachms.

SALIX alba. The White Willow. See TONICS.

SALIX fragilis. The fragile Willow. See TONICS.

SALVIA officinalis. Diandria Monogynia. Verticillatæ. Southern parts of Europe. (Folia.) Sage. The leaves of this plant possess some degree of astringency, as is proved by their chemical agency on solutions of vitriolated iron. It is said that infusions of them in water, or red wine and water, have been given with good effect in hectic perspirations; in which cases, their efficacy would doubtless be increased by the addition of a due proportion of vitriolated zinc and tincture of opium. The infusion of the leaves, mixed with honey and vinegar, is a well-known gargle, frequently resorted to in cases of sore throat, in this and other countries. Beyond this, what more can, consistently with accurate observation and experience, be asserted concerning the medical virtues of sage? Yet, as *Bergius* has noticed, in the year 1688, one Chr. Fred. Paulini had the patience to write 414 pages in 8vo. on this vegetable alone!

¶ *SYMPHYTUM officinale.* Pentandria Monogynia. Asperifoliæ. Indigenous. (Consolida major. Radix et Herba.) Comfrey. Decoctions of the root and herb of this plant were formerly employed

for restraining hæmorrhages from the lungs and other viscera; but in modern practice the preference is given to the catechu, kino, and other articles of this class, which have been previously noticed.

TORMENTILLA erecta. Icosandria Polygynia. Senticosæ. Indigenous. (Radix.) Tormentil. Half an ounce of the root coarsely pounded and boiled in sixteen ounces of water down to twelve, gives a good astringent decoction, suited to the same cases as the decoction of logwood and infusion of catechu, before mentioned. The pulverized root is an ingredient in the *Pulvis Cretæ compositus*, Ph. Lond. for the doses and uses of which, see the article Creta.

(3) *From the Mineral Kingdom.*

ARGILLA vitriolata. Alumen, Ph. Lond. et Eblan. *Sulphas Aluminæ*, Ph. Ed. (Super-Sulphas Aluminæ et Potassæ.) Vitriolated Argill. (Alum.) Sulphate of Alumina. Super-Sulphaté of Alumina and Potassa. Alum is a triple and sometimes a quadruple salt, (*Fourcroy* *Connaissances Chimiques*, Tom. III. sect. 5.) consisting of argill, (alumina) vitriolic acid, (sulphuric acid) and potass. And sometimes having the further addition of ammonia, to its composition. Some sorts of alum contain, moreover, an impregnation of iron; from which (or any other metallic additament) they may be freed by the purifying process (*Aluminis purificatio*) directed by the London College.

Alum holds a principal place among astringent medicines; and is frequently and successfully employed in cases of diarrhœa, diabetes, (*Mead, Brochlesby, Vogel,*) fluor albus, and hæmorrhages from the nose, lungs, and uterus. (*Helvetius, Cul-len.*) Dr. Wall prescribed it in combination with the cinchona, in malignant fevers, accompanied with hæmorrhages. On these occasions it is joined with mucilages, camphor, catechu, extract of cinchona, opium, &c.—It is also added to gargles and lotions for the throat and mouth, in cases of angina and aphthæ. Of its use as an auxiliary to the cinchona in intermittent fevers, and to opium in certain species of colic, notice will be taken under Tonics. Dose, from five to fifteen grains; in larger doses it is apt to vomit and purge.—The *Pulvis Sulphatis Aluminæ compositus*, Ph. Ed. (formerly *Pulvis Stypticus*) of which alum is the basis, has been already noticed under the article kino, where its uses and doses are mentioned. *Serum lactis aluminosum* (Alum Whey) is prepared by boiling a drachm or two of alum in a pint of milk and afterwards straining. (*Thesaur. Med.* p. 161.) Two or three ounces are given for a dose, in diabetes.—Alum is added to gargles either in its crude state (pulverized) or deprived of its water of crystallization by exposure to heat, in which state it is termed burnt alum. (*Alumen ustum.*) One drachm of the crude alum or half a drachm of the burnt alum, to a pint of any astringent decoction or infusion, will be found a sufficient proportion.. (*Thesaur. Med.* p. 165.) — The *Cataplasma Aluminis*, Ph. Lond. *Coagulum aluminosum*, Ph. Eblan. (Alum

Curd) is made by shaking a piece of alum with the white of egg, until the latter is curdled. It is used in some species of ophthalmia, spread upon rag and applied in bed.—The *Aqua Aluminis composita*, Ph. Lond. (formerly *Aqua aluminosa Bateana*) is made by dissolving half an ounce of alum, and half an ounce of vitriolated zinc, in a quart of boiling water. It is used for collyria, lotions, and injections. Alum is an ingredient in the *Solutio Sulphatis Cupri composita*, Ph. Ed. (See Cuprum.) *Lind de Aluminis Virtute Medicâ*, 1784.

¶ *BOLUS Gallicus et Armenus*. French and Armenian Bole. See ABSORBENTS.

CALX viva. Quicklime. The *Aqua calcis*, Ph. Lond. Ed. et Eblan. is sometimes useful in the diarrhœa which occurs in hectic disorders (where it is often added to ass's or cow's milk made warm); also in diabetes and fluor albus. Its preparation and doses have been already mentioned under ABSORBENTS.

CRETA præparata, Ph. Lond. et Eblan. *Carbonas Calcis præparatus*, Ph. Ed. *Mistura Cretacea*, Ph. Lond. et Eblan, *Potio Carbonatis Calcis*, Ph. Ed. Useful in the same cases as the preceding. See ABSORBENTS.

CUPRUM vitriolatum. Vitriolum cœruleum, Ph. Lond. et Eblan. *Sulphas Cupri*, Ph. Ed. This metallic salt is chiefly employed externally by the surgeons as an escharotic (see Antiseptics) and dissolved in large

quantities of water, as a collyrium in purulent ophthalmies. To this last purpose is adapted the *Solutio Sulphatis Cupri composita*, Ph. Ed. (formerly called *Aqua styptica*) which consists of sulphate of copper and sulphate of alumina, each three ounces, water two pounds, diluted sulphuric acid one ounce and a half. The alum and vitriol are dissolved in the water by boiling, after which the liquor being filtered, the acid is added to it. When used as a collyrium, this must be further diluted with water. Pledgets dipped in this solution are put up the nostrils to stop bleedings from the nose.—Some practitioners have ventured to prescribe vitriolated copper internally in cases of hæmorrhage, and in alvine fluxes, in doses of an eighth or a quarter of a grain; but for these purposes the vitriolated zinc is to be preferred, being a safer medicine and producing the same effects when given in larger doses. Concerning the employment of this metallic salt in intermittents, see TONICS.

Cerussa acetata, Ph. Lond. et Eblan. *Acetis Plumbi*, Ph. Ed. (*Saccharum Saturni*.) Acetated Cerusse. Acetite of Lead. Sugar of Lead. (see p. 322.) This, like all the saline preparations of lead is powerfully restringent; and has accordingly been prescribed internally by some practitioners, in cases of pulmonary and uterine hæmorrhage, in doses of half a grain to a grain and a half, made into pills with rose-conserve, and joined with opium. (*Reynolds* in Vol. III. of the Med. Transact. of the Lond. Coll. of Physicians.) Many physicians have been deterred from the exhibition of acetated lead in these and other

cases, by the consideration of the deleterious effects which those persons experience, who are frequently or constantly exposed to the effluvia arising from this metal, in the working of mines, the smelting of ores, and in certain arts, trades and manufactures; but, as *Dr. Donald Monro* (Med. and Pharmaceutical Chemistry, Vol. i. p. 281) has remarked, its occasional exhibition, in the manner above proposed, is very different from its being taken into the body constantly, and for a great length of time. He has seen several instances where it has produced the best effects in the cases above-mentioned, without producing the least inconvenience: he therefore thinks that where other medicines fail, and the patients are in danger of dying from the bleeding, a physician is justified in ordering this metallic preparation. Should any symptoms of colica pictonum occur during its use, it will be proper to desist and to remove them by the proper laxative and demulcent remedies. Where, from peculiar irritability of the stomach and intestinal canal, it produces this effect in the small doses before-stated, even though combined with opium, it should be discontinued, and some other medicine of this class should be prescribed in its place. Acid liquors must be withheld during its use. In our own practice we have generally given the preference to vitriolated zinc, administered in nauseating doses; and thus have had no occasion to counteract those mischievous effects on the bowels which this and other preparations of lead are so liable to produce.—Acetated cerusse is frequently employed in injections against mild and virulent gonorrhœa. For this purpose half a drachm

two scruples may be dissolved in eight ounces of water. (*Thesaur. Med.* p. 167.) When used as a collyrium, the proportion of the metallic salt in the solution should not exceed two or three grains to every ounce of water. See REFRIGERANTS.

ZINCUM vitriolatum, Ph. Lond. *Sulphas Zinci*, Ph. Ed. *Vitriolum album*, Ph. Eblan. Vitriolated zinc. Sulphate of Zinc. White Vitriol. (see p. 323.) This is an useful astringent in fluor albus, and in pulmonary and uterine hæmorrhages, made into pills with rose- conserve, and given in doses of half a grain or a grain, at intervals of two or three hours; until it excites considerable nausea, when it should be suspended till that effect goes off, and repeated again, if the bleeding should continue. On these occasions it may be joined with opium, digitalis, and other auxiliaries. It will rather promote than impede the operation of this medicine to give at the same time cold liquors acidulated with the vitriolic acid. For other observations, on the internal use of this metallic salt, see TONICS.—Vitriolated zinc is a common and useful ingredient in eye-waters, in which camphor is sometimes joined with it, as in the instance of the *Aqua zinci vitriolati cum camphora*, Ph. Lond. which consists of vitriolated zinc half an ounce, camphorated spirit half an ounce by measure, and boiling water two pints. To the same purpose (and for injections also) is applicable the *Solutio Sulphatis Zinci*, Ph. Ed. which consists of sulphate of zinc

sixteen grains, water eight ounces, and diluted sulphuric acid sixteen drops. For other observations on vitriolated zinc, see REFRIGERANTS.

TABULAR VIEW
OF
THE CONTENTS OF CLASS VII.

TONICS,

(1) *From the Vegetable Kingdom.*

- ¶ *ÆSCULUS Hippocastanum.* Horse Chestnut.
- ANGUSTURA. Angustura Bark.
- ANTHEMIS *nobilis.* Chamomile.
- ARNICA *montana.* Leopard's bane.
- ¶ ARTEMISIA *Abrotanum.* Southernwood.
- *Absinthium.* Common Wormwood.
- *maritima.* Sea Wormwood.
- BRUCEA *antidysenterica.* Brucea.
- ¶ CENTAUREA *benedicta.* Blessed Thistle.
- ¶ CICHOREUM *Intybus.* Cichory.
- CINCHONA *officinalis.* Peruvian Bark.
- CITRUS *Aurantium.* Seville Orange.
- COLOMBA. Columbo-root.
- CLUTIA *Eleuteria.* [Croton Eleutheria] Cascarilla.
- ¶ GENTIANA *Centaureum.* Lesser Centaury.
- GENTIANA *lutca.* Yellow Gentian.
- ¶ GEUM *urbanum.* Herb Bennet.
- ¶ INULA *Helenium.* Elecampane.
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- ¶ MARRUBIUM *vulgare.* White Horehound.
- MENYANTHES *trifoliata.* Buck-bean.
- MYRRHA. Myrrh.
- ¶ PANAX *quincifolium.* Ginseng.
- POLYGALA *amara.* Bitter Polygala.
- QUASSIA *amara.* Bitter Quassy.
- *Simarouba.* Simarouba.

QUERCUS Robur. Oak.
SALIX alba. White Willow.
 ——— *fragilis.* Fragile Willow.
SWIETENIA febrifuga. Febrifuge Mahogany.
TANACETUM vulgare. Tansy.
VINUM rubrum Portugallicum. Red Port Wine.

ACIDUM nitricum. Nitric Acid.

(2) *From the Mineral Kingdom.*

ACIDUM vitriolicum, Ph. Lond. et Eblan. *Acidum Sulphuricum,* Ph. Ed. Vitriolic Acid. Sulphuric Acid.
ARGILLA vitriolata. Alumen, Ph. Lond. et Eblan. *Sulphas Alumina,* Ph. Ed. Vitriolated Argill. Alum. Sulphate of Alumina.
ARSENICUM album. White Arsenic.
CUPRI quædam præparata. Some preparations of Copper.
FERRUM ejusque præparata. Iron and its preparations.
ZINCI quædam præparata. Preparations of Zinc.

Gas oxygenium. Oxygen Gas.

Balneum frigidum. Cold Bath.

CLASS VII.

TONICS.

¶ **ÆSCULUS** *Hippocastanum*. Heptandria Monogynia. Trihilatæ. Native of Asia, but naturalized to Europe. (*Hippocastanum*. Cortex.) The Horse Chestnut. Of late years the bark of this tree has been much extolled by foreign writers as a substitute for the Peruvian bark in intermittent and other fevers, and in all cases where tonics are required. Dose of the dried and pulverized bark half a drachm. In decoction, an ounce to a pint and a half of water boiled down to a pint. Of the strained liquor an ounce and a half or two ounces may be given at a time.—This bark possesses, it cannot be denied, considerable astringency, with a bitter and aromatic quality; in which respects it resembles the cinchona; but in febrifuge virtues we suspect it to be much inferior to the Peruvian drug, and not at all preferable to the salix and some other vegetables of this class which will be hereafter noticed. Yet in some countries where, in consequence of a limited commerce, the cinchona is either not procurable or exceedingly scarce, practitioners may at times be under the necessity of prescribing this.

For a catalogue of writers on this article, see *Murray's Apparatus Medicaminum*, Vol. iv. and *Woodville's Medical Botany*, Vol. II.

ANGUSTURA (Cortex.) Angustura bark. South America. This is a valuable tonic, preferable in many febrile disorders to the Peruvian bark. It is particularly suited to cases of diarrhœa, and those bilious conditions of the intestinal canal (after due evacuations) which commonly prevail in this country, in the summer and autumnal seasons. Dose of the powder fifteen or twenty grains. It is also given in infusion. If we were to enumerate more particulars on this subject, we should only repeat the observations inserted at p. 182, of the *Thesaur. Medicam.* *Brande* on the Angustura bark, 1791. *Murray* Apparat. Med. Vol. vi. *Lettsom* in Vol. iv. of *Memoirs of the Medical Society*, and *Winterbottom* in Vol. vii. of *Medical Facts and Observations*.

ANTHEMIS nobilis. Chamæmelum. (See p. 170.) Chamomile. The dried flowers of this herb are justly held in high esteem as a bitter and strengthening medicine; and are successfully employed not only in cases of chronic debility and bilious conditions of the stomach and intestinal canal; but likewise in certain febrile affections, particularly agues. These last have sometimes yielded to this bitter, after having resisted the action of the Peruvian bark in all forms and doses. (*Morton, Hoffman, Mead, Baker, Heberden.*) In these cases the chamomile (whether administered in substance or in infusion) is combined with myrrh, ginger, and

other aromatics. (*Thesaur. Med.* p. 185—193.) It has also been found useful to join with it an alkaline salt, such as prepared kali or natron. The *Extractum Chamæmeli*, Ph. Lond. Ed. et Ebl. is prescribed in debilities of the stomach, in chlorosis, &c. in doses of ten or fifteen grains, joined with myrrh and preparations of iron. *Baldinger vires Chamomillæ*, 1775. *Groote virtus Chamæmeli antipyretica nuperis aliquot experimentis illustrata*, 1783.

ARNICA *montana*. Leopard's-bane. See STIMULANTS.

¶ ARTEMISIA *Abrotanum*. (See p. 328.) Southernwood. Infusions of this herb have sometimes been prescribed in cases where bitters have been required; but as it possesses no advantages over the following species of artemisia, it may well be dispensed with.

ARTEMISIA *Absinthium*. (See p. 329.) Common Wormwood.

¶ ARTEMISIA *maritima*. Absinthium maritimum. (See p. 329.) Sea Wormwood. These two last species have been frequently prescribed in infusions, in cachectic, hydropic, and worm-cases; but, as we have before remarked, there can be no occasion for retaining on the list of the materia medica, more than one species of this genus; which should perhaps be the artemisia absinthium.—In the Ph. Lond. there is a *Conserva Absinthii maritimi* which is used by some as a stomachic and antiscorbutic. Dose, one or two drachms. *Fehr de Absinthio analecta*, 1668.

BRUCEA antidiysenterica. Diœcia Tetrandria. Frut. Abyssinia. (Cortex. Radix.) Brucea. The bark and root of this shrub possess considerable bitterness, and are employed with great success by the Abyssinians in alvine fluxes. Of the pulverized bark or root fifteen grains may be given for a dose. In decoction or infusion three drachms or half an ounce may be employed to a pint of water. It were to be wished that this drug could be imported into this country from Abyssinia, through Egypt.— Might it not also be procured in another direction through our commerce to the Red Sea, and be introduced into our East-India Settlements with very great advantage? See Vol. v. of *Bruce's Travels* to discover the Source of the Nile, 1790.

¶ *CENTAUREA benedicta*. (See p. 173.) Blessed Thistle. As a bitter and stomachic not at all preferable to chamomile, buckbean, or quassy; and may therefore be rejected. Yet it has been dignified with the pompous titles of *asylum languentium*, *medicina patrumfamilias polychresta*, *verusque pauperum thesaurus*!

¶ *CICHOREUM Intybus*. Syngenesia Polygamia Æqualis. Compositæ. Semiflosculosæ. Indigenous. (Cichoreum. Folia et Radix) Cichory or Succory. This is another bitter vegetable, which, though highly prized in other countries, is thought little of in this. It has no place in our Pharmacopœias, and certainly there is no occasion for it. On the Continent, the expressed juice of the leaves and decoctions of the roots, are employed in cachectic, hydropic, and icterical cases. Foreigners are also

fond of prescribing an extract and syrup prepared from this plant.

CINCHONA officinalis. Pentandria Monogynia. Contortæ. Arbor. Spanish America. (Cortex Peruvianus) Peruvian Bark. Of all the medicines of this class, the cinchona is that which is most extensively used; and certainly it is preferable to most of the other articles for the purposes of counteracting febrile affection, and of restoring tone and vigour in the numberless cases of general and particular debility which are daily met with. Hence its employment in intermittent and remittent fevers; in the early stages of the jail and petechial fevers; in malignant small pox; malignant angina and the plague; (see ANTISEPTICS) in all convalescencies; in certain convulsive affections connected with too great sensibility and irritability of the nervous system; such as hysteria, chorea, epilepsy, whooping-cough; (*Murray de tempore Cort. Per. in Tussi Convulsivâ exhibendi*, 1776, and reprinted in his *Opuscula*, Vol 1.) in certain disorders depending upon an impaired condition of the organs of digestion and secretion, and accompanied with a languid or feeble action of the sanguiferous system; such as chlorosis, diarrhœa, fluor albus, gleet; in diminished actions of the absorbents and lymphatic glands, such as dropsy, venous hæmorrhage, scrophula; in cachectic, phthisical and scorbutic affections; in all cases of foul and chronic ulcers; in malignant erysipelas; and in gangrene. (See ANTISEPTICS.)

Having noticed the principal circumstances to be attended to in the administration of this drug

in intermittent fevers at pages 175—178 of the *Thesaur. Med.* it will be unnecessary to discuss that topic here. We shall only remark that, in this climate the Peruvian bark will not always answer for the cure of agues, and that where it disagrees, chamomile and other bitters, joined with myrrh and aromatics (*ibid* p. 185) may be advantageously used in its stead. But it more frequently disagrees in remittent fevers; because they are generally accompanied with a bilious or slimy condition of the intestinal canal, and on that account require the repeated employment of antimonial, mercurial, and other evacuating medicines. Hence the lighter tonics, such as the angustura and colombo, succeed best in the majority of such cases. (*R. Pearson on Bilious Fevers, 1799.*)

In regard to its exhibition in continued fevers, much mischief is often occasioned by prescribing it too soon. *Morton* erred in this particular; and the remark which is contained in the posthumous work of a late eminent physician (*Heberden Commentarii de Morborum Historia et Curatione, p. 155*) will, we are of opinion, be of disservice rather than of use to the practitioners of physic, as it is not accompanied with any restriction as to time (whether the fever be at the onset, the acme, or the decline) and other qualifying circumstances. We have been witness, in several instances, to a very great aggravation of symptoms, in consequence of a free exhibition of the cinchona in the early period of fevers of a continued type;—of its exhibition at a time when the circulating system has been in a state of too much action, when the skin has been

parched, the tongue foul and dry, and the urine high-coloured and without sediment. Under such circumstances of continued fever, we have known the Peruvian bark, in a much less dose than that mentioned by *Dr. Heberden*, to produce a very injurious effect. In fact, it should always be kept back in these fevers (except where the marks of a septic condition appear at the beginning) until the inordinate arterial movements and increased heat shall have been considerably abated, and the stomach and intestinal canal duly freed from their impurities. This is a business of some days; and when we have proceeded so far, camphorated and opiate medicines will often answer better, even at this period, than the Peruvian drug: But afterwards, when the febrile action is nearly spent, when the heat of the body is not above the natural temperature, when the skin is observed to be soft, the tongue moist, and in part cleared of its morbid covering; then the cinchona may be thrown in with the best effect.

These observations relative to the too hasty employment of the Peruvian bark in continued fevers, are meant to apply to such of those fevers as are not early accompanied with marks of great malignancy; such as extreme debility and fluttering of the pulse, proclivity to fainting, coldness of the extremities, hæmorrhages, petechial eruptions or gangrenous ulceration of the throat: For, in all such cases of continued fever, the cinchona should be largely administered, joined with the mineral acids (see ANTISEPTICS) in every period of the disease. In like manner, it will often be necessary to employ it early in certain eruptive fevers of a

continued type, such as the malignant erysipelas, malignant small pox, malignant scarlatina and the plague. In these cases not only acids, but Port Wine also, are given in conjunction with the bark. (See ANTISEPTICS.)

In intermittent fevers, the cinchona is best administered in substance, either alone, or joined with aromatics, with ammoniacal salts, with aloetics, with rhubarb, &c. (*Thesaur. Med.* p. 179.) Moreover in these cases it is sometimes joined with astringents and aromatics, (*Ibid.* 180, 181, 192) and sometimes with opium.—The decoction alone is not powerful enough for the cure of intermittents. When given therefore in this form it is necessary to add to each dose of the decoction not only some of the tincture but a quantity of the extract or powder also.—To children labouring under agues, the extract is less nauseating than the powder, and may be given mixed up with sugar and milk and water. (*Heberden Commentarii de Morb. Hist.* p. 160.) In continued fevers it is given in decoction, joined with camphor, with serpentaria, with acids, with opiates, (*Ibid.* p. 205) and accompanied with the use of Wine; for where the bark agrees in these fevers, wine and especially claret or port wine, agree also, and greatly promote its operation. In cases of chronic debility, it is combined with some of the warmer stomachics, such as ginger and cascarilla, or with bitters and chalybeates. (*Ibid.* p. 193—194.) In certain convulsive affections, such as chorea and epilepsy, magnesia, prepared kali, or prepared natron, together with camphor or opium, are advantageously

mixed with it; and in cases of hysteria, the water or spirit of ammonia, valerian, &c. In dropsical cases it is joined with squill, digitalis, and other diuretics. Where the bark cannot be administered by the mouth, it may be thrown into the intestinal canal, joined with opium, clysterwise. (*Thesaur. Med.* p. 206.) It is said, too, that, in the instance of children who have refused to take this drug by the mouth, the powder moistened with the decoction and made into a cataplasm, has been applied to the region of the stomach with evident good effect, in intermittent fevers; but putting the feet of children in these cases, in a bath made of the decoction, does no good. (*Heberden Commentarii de Morb. Hist. et Curatione*, p. 160.) Better success may be expected from rubbing, after the manner lately recommended by *Brera* and other Italian physicians, the extract of the bark (previously rendered sufficiently moist by trituration with gastric juice, saliva or honey) upon the thighs or other parts of the body. In this mode of application a considerable absorption takes place, and a very powerful effect is often produced upon the system. (*Duncan's Annals*, and *Marabelli Apparatus Medicam.* 1801.)—Dose of the bark in powder from half a drachm to two drachms, mixed in any proper vehicle, or made into an electuary.—The *Decoctum Cinchonæ*, Ph. Lond. (*Decoctum Corticis Peruviani*) is made by boiling for ten minutes, in a covered vessel, one ounce of the pulverized bark in one pint and three ounces of water. Dose, from one to three or four ounces; generally joined with a small quantity of the tincture, and sometimes strengthened by the addition of the powder or extract also. The *Decoctum Cinchonæ*

officinalis, Ph. Ed. is made by boiling for the same length of time one ounce of the bark in a pound and a half of water. The *Decoct. Cort. Per.* Ph. Eblan. is made by boiling for ten minutes six drachms of the bark in eighteen ounces of water. In all the three instances the decoction is to be boiled in a covered vessel, and to be strained while hot; as it is liable to throw down a sediment in cooling, and if not strained till then, would lose much of its virtues. If an infusion is preferred, it may be made by triturating for half an hour the fine powder, alone, or with a fifth or sixth part of calcined magnesia, with rather more than half a pint of cold water; the water being added gradually; after all the water has been added, the whole should be well shaken together, and then strained. Of such an infusion, from two to three ounces may be given for a dose, with or without spirituous and aromatic additions.—In the Lond. Ph. there are two extracts prepared from this drug, viz. the *Extractum Cinchonæ*, which might have been termed *Extractum cinchonæ per aquam*, and which is obtained by evaporating the water in which the bark has been boiled to the state of either a soft (*extractum molle*) or hard extract (*extractum durum*); the former being intended for pills, the latter for any other purposes. Dose, from ten grains to a scruple; made into pills, or mixed up with aromatic liquors, or with the decoction.—It is a preparation of little efficacy, all the aromatic properties of the bark being dissipated in the long-continued boiling: And the *Extractum Cinchonæ cum resina*, which might have been termed *Extractum Cinchonæ per spiritum vinosum*, and which is prepared by digesting the bark first in rec-

tified spirit of wine, then pouring off the tincture, and boiling the residuum in water. The tincture and decoction are strained separately; the one is distilled and the other evaporated; after which the two residuums (*viz.* the resin and the extract) are mixed together and evaporated to a consistence fit for being made into pills. The *Extractum Cinchonæ officinalis*, Ph. Ed. is made in the same way. Dose of either from five to fifteen grains.—This spirituous extract is certainly preferable to the aqueous extract; but neither the one nor the other can be relied upon in intermittents and other disorders, which require for their removal the full effect of the bark.—In the instance of children, whom it is sometimes impossible to compel to swallow the bark, these extracts may be conveyed into the body by friction, after the Italian method before-mentioned. The *Tinctura Cinchonæ sive Corticis Peruviani*, Ph. Lond. is made by digesting for eight days six ounces of the bark in two pints of proof spirit. Dose, two or three drachms. The ¶ *Tinctura Cinchonæ Ammoniata*, Ph. Lond. is made by digesting for ten days four ounces of the bark in two pints of compound spirit of ammonia. Dose, from thirty to sixty drops. It is a bad preparation, it being impossible to give an active dose of the bark in this manner. The ammoniacal menstruum previously impregnated with essential oils, extracts but little even of the aromatic properties of the bark. If a combination of the volatile alkali with the Peruvian drug be desired, it should be made by adding a proper proportion of the ammonia to the decoction, or to the common spirituous tincture of cinchona.—Infinitely preferable to the preceding ammoniated preparation,

is the *Tinctura Cinchonæ composita*, Ph. Lond. which is made by digesting for a fortnight two ounces of the bark, one ounce and a half of the dried rind of Seville oranges, three drachms of Virginian snake-root, one drachm of saffron, and two scruples of cochineal, in twenty ounces of proof spirit. Dose, one, two, or three drachms. This is *Huaham's* celebrated tincture of Peruvian bark. (See his Essay on Fevers, p. 122.) This "I have used (says he) for many years with success, not only in intermitting and slow nervous fevers; but also in the putrid, pestilential, and petechial, especially in the decline: and that too many times, though the remissions have been very obscure, and yet with a very good effect. But if the patient is costive, or hath a tense and tumid abdomen, I always premise a dose of rhubarb, manna, or the like."—He gave it in any appropriate draught, or diluted wine, with ten, fifteen, or twenty drops of elixir of vitriol.—The colouring materials, the saffron and cochineal, seem to be superfluous ingredients in this tincture.—In the Ed. Ph. there is but one *Tinctura Cinchonæ officinalis*, which is made by digesting for seven days four ounces of the bark in two pounds and a half of diluted alkohol. Dose, one, two, or three drachms. The *Tinct. Cor. Per.* Ph. Eblan. is made by digesting for 7 days 4 ounces of the bark in 2 lbs. of diluted alkohol.—The cinchona is an ingredient in the *Vinum Gentianæ comp.* Ph. Ed. See the article Gentiana.

What has been said above concerning the uses, preparations, and doses of the cinchona officinalis, or common Peruvian bark, will apply to most of the

other species and varieties of this genus; such as the *pale*, the *red*, and the *yellow*. (*Ruiz* on the different species of cinchona, (in the German tongue) 1794; *Lambert*, description of the genus cinchona, 1797. See also the *Flora Peruviana*.

The high price of this drug, and the difficulty of procuring it in some countries, have given occasion to the employment of other barks and vegetable substances (in which the bitter and astringent principles are united) in its stead; such as the *æsculus hippocastanum*, the *quercus robur*, the *genuum urbanum*, the *salix alba*, the *swietenia febrifuga*, &c. for observations on all which, the reader is referred to those articles severally.—Much valuable information, relative to the use of the Peruvian bark in intermittent, remittent, and continued fevers, may be derived from the writings of *Sydenham*, *Morton*, *Torti*, *Huxham*, *Werlhof*, *Cleghorn*, *Cullen*, *Pringle*, *Monro*, *Baker*, *Heberden*, *Lind*, *Clarke*, *Fordyce*, *Blane*. Among the separate treatises on this drug, the following may be referred to as the most esteemed: *de Berger* de Chinchina ab iniquis Judiciis vindicata, 1711, and reprinted in Vol. v. of *Haller's* *Dissertationes Medico-Practicæ*. *Hoffmann* de recto Corticis Chinæ Usu in Febribus, 1728, and reprinted in Vol. vi. of his works. *Buchwald's* *Methodus curandi Febres intermittentes per Cort. Cinchonæ*, 1751. *Linnaeus* de Cortice Peruviano, 1758, and reprinted in Vol. ix. of the *Amœnitates Academicæ*. *Triller* de Cort. Per. Usu, 1758, and reprinted in Vol. i. of his *Opuscula*. *Buchner* de Usu Cort. Per. cum Camphora remixti in Febribus ex Putredine ortis, 1762,

Pulteney de Cinchona Officinali Edinb. 1764, and reprinted in Vol. III. of *Smellie's* Thesaur. *Baldinger* de Cort. Per. Connubiis, et eum exhibendi Modis, 1769.—*Saunders* on the superior efficacy of the Red Peruvian Bark in the Cure of Fevers, 1782. *Sheete* on the Quilled and Red Peruvian Bark, 1786. *Relph* on the Yellow Bark, 1794. *O'Ryan* on ditto, 1794. *Vaughan* on ditto, 1795. *Marabelli* de China lutea, 1796, and in his *Apparat. Med.* 1801.

CITRUS *Aurantium*. (See p. 318, 330.) *Aurantium hispalense*. Seville Orange. The outer rind of this fruit (cortex exterior vel flavedo corticis) abounds with a warm essential oil, which in conjunction with the bitter principle, also present in the rind, has an excellent stomachic effect; and is accordingly prescribed with great advantage in cases of indigestion, flatulency, gouty conditions, and convalescencies. It is an useful addition to the Peruvian bark in intermittents, and in many forms of chronic debility in which that drug is employed. In gouty affections of the stomach, it is joined with magnesia and other absorbents. Of the dried rind, from fifteen grains to two scruples may be given for a dose. In infusion, two or three drachms may be used to half a pint of boiling water.—There is a *Conserve Aurantii* and a *Syrupus Aurantii* in the L. Ed. and Dublin pharmacopœias, made in the usual way. The first, viz. the conserve, is given in doses of two or three drachms; the last is employed for flavouring draughts and juleps. The *Tinctura Aurantii Corticis*, Ph. Lond. et Ebl. is an elegant and useful preparation. It is made by digesting for three days three ounces of

the fresh rind in two pints of proof spirit. Dose, one or two drachms. Added to draughts of the camphorated mixture, or some of the distilled aromatic waters, and joined with absorbents, and opiates, or sometimes with aloetics and chalybeates, this tincture is of eminent service in those debilities of the stomach, and alimentary canal, which originate from hard drinking. Of the leaves notice will be taken under ANTISPASMODICS.—What is here said of the Seville orange will apply to the small unripe Curaçao oranges.

CLUTIA Eluteria. [Croton Eleutheria.] Diœcia Gynandria. Tricoccæ. East and West Indies. Arbor. (Cascarilla. Cortex.) Seaside Clutia. Cascarilla. This bark is a valuable aromatic bitter. Like the angustura bark, it is prescribed very successfully in alvine fluxes, (but in smaller doses, being more stimulant) and may be given in most cases where strengthening medicines are required. It is an useful adjunct to the cinchona in intermittent and other fevers, and in convalescencies; as it corrects the laxative effect which the Peruvian drug often has upon the bowels, and by its aromatic properties increases its tonic powers. It is also advantageously joined with chamomile, gentian, and other bitters. Dose of the pulverized bark from ten to thirty grains.—The *Extractum Cascarillæ*, Ph. Lond. is prepared in the same manner as the resinous extract of Peruvian bark. Dose, from ten to fifteen grains. The *Tinctura Cascarillæ*, Ph. Lond. et Eblan. is made by digesting for eight days four ounces of the bark in two pints of proof spirit. Dose, one or two drachms. It is an elegant and

active preparation. The Dublin college use 2 lbs. of proof spirit to the same proportion of cascarilla, and digest for 7 days. *Boehmer de Cortice Cascarillæ*, 1738.

COLOMBA. (Radix.) Columbo - root. The plant from which this excellent bitter drug is obtained has not yet been described by botanists. It is brought to Europe from Ceylon. This bitter mucilaginous root is frequently and successfully employed in debilities of the stomach and intestinal canal; in cholera; in bilious diarrhœas; and in bilious remittent fevers; in which last it often agrees where the Peruvian bark will not. (*R. Pearson on Bilious Fevers*, 1799.) It is likewise serviceable in the nausea and vomiting which occur in pregnancy. In the last mentioned cases it is joined with orange-peel, with ginger, with peppermint, or other aromatics; in cholera, with aromatics and opiates; in bilious diarrhœas and bilious fevers, with neutral or alkaline salts. Dose of the pulverized root from fifteen grains to half a drachm. In infusion, two drachms to a pint of hot water. The *Tinctura Colombæ*, Ph. Lond. is made by digesting for eight days two ounces and a half of the root in two pints of proof spirit. In the Ed. and Dublin Pharmacopœias, 2 ounces of columbo are digested in 2 lbs. of diluted alkohol for 7 days. Dose of these tinctures one or two drachms. *Percival* on the Colombo-root in Vol. II. of his Medical and Experimental Essays; and *Josse* in Vol. III. of the *Histoire de la Société de Med. de Paris*.

¶ GENTIANA *Centaurium*. [Chironia Centau-

rium of some botanists.] Pentandria Digynia. Rotaceæ. Indigenous. (Centaureum minus. Cacumina seu summitates florentes.) Lesser Centaury. The flowering tops and other parts of this plant possess a considerable degree of bitterness, and hence have been employed in all cases in which it is customary to use stomachic medicines. We conceive, however, that it is not at all preferable to meny-anthes, tansy, quassia and other bitter vegetables of this class; and we therefore think it should be erased from the over-crowded list of the materia medica. Dose of the dried and pulverized tops, from fifteen grains to two scruples. In infusion, two or three drachms to half a pint of hot water.

This and the following species of gentiana are ingredients in the Portland powder; once in the highest repute as a remedy against the gout, but latterly fallen into discredit in consequence of the censures passed upon it by *Werlhof*, *Cullen*, *Darwin*, and others. Doubtless the long-continued use of all bitters is prejudicial to the living body, and of some the deleterious operation is very conspicuous. Hence the paralytic and apoplectic affections, which have supervened in the instance of gouty persons who have taken the Portland remedy for a great length of time, have, we think, not without reason been ascribed to the centaureum and other bitter herbs of which it is composed. Dr. *Heberden*, however, in his elegant work (entitled *Commentarii de Morb. Hist. et Curatione*, p. 49) is of opinion that the aforesaid fatal disorders, with which gouty persons have been seized while under a course of this remedy, are not imputable to it, but

to the disease itself; whose natural tendency in constitutions advanced in years, and that have long endured its attacks, is to terminate in such manner. He believes it to have had the effect, in many instances, of mitigating the fits when present, and of rendering their returns less frequent. The only objections he sees against the Portland powder are, that it is too compound, [the ingredients are the roots of birth-wort (*aristolochia*) and gentian, the tops and leaves of germander (*chamædrys*), ground-pine (*chamæpitys*) and lesser centaury—equal quantities by weight of each] and that it has generally been given in doses so large as to disagree with the stomach, and thus from its bulk and bad taste to have been loathed by the patients. Instead, therefore, of rejecting it altogether, he recommends the correcting of these inconveniencies, by reducing the number of ingredients, and more carefully apportioning the dose. Convinced, however, as we are, that injurious effects have been produced upon the system by the habitual use of all bitters, we would not advise the Portland powder to be resorted to as an antipodagric, even under the improvements in regard to composition and administration, proposed by Dr. *Heberden*. Rather would we recommend in such cases the frequent or continued employment of *cañella alba*, ginger, (see *Amomum* under Stimulants) and other aromatics; *occasionally* interposing tansy, zedoary, serpentaria, and other bitters; for very different is the having recourse to the last mentioned remedies *at times*, (such as on the approach of gouty symptoms, and for a few days after a paroxysm) from the *constant* exhibition of them. *Wedel de Centauro minori*, 1713.

GENTIANA lutea. Class and order as above. The Alps, Apennines, and Pyrenæes. (Radix.) Yellow Gentian. The root of this beautiful plant is an excellent bitter, very successfully and very generally employed as a stomachic and strengthening medicine. It is particularly useful in various chronic affections connected with debility, such as dyspepsia, diarrhœa, hysteria, chlorosis, dropsy. It has also been given with good effect in intermittent and remittent fevers, joined with the Peruvian bark; and in convalescencies from all fevers. In these and other cases it is combined with aromatics and chalybeates; sometimes with acids; at other times with alkaline salts, especially in dyspeptic and chlorotic affections, as also in certain disorders of the bowels; with absorbents and aromatics in cases of gout—but with the precautions mentioned on the subject of the Portland powder, under the preceding species. In dropsies it is combined with the squill, neutral salts, and other diuretics.—The *Infusum Gentianæ compositum*, Ph. Lond. (formerly *Infusum Amarum simplex*) is made by macerating for one hour, in twelve ounces of boiling water, one drachm of gentian-root, a drachm and a half of the dried outer rind of the Seville orange, and half an ounce of the fresh outer rind of the lemon. Dose, from half an ounce to an ounce and a half. A larger quantity is apt to excite nausea. In our own practice we have always found it to answer better, when administered in combination with some of the aromatic distilled waters, and in doses not exceeding an ounce, than when given alone. The camphor mixture is an useful addition to it in many cases. In the *Infusum Gentianæ compositum*, Ph. Eblan.

there are 2 drachms of gentian-root, $\frac{1}{4}$ ounce fresh lemon-peel, 1 and $\frac{1}{4}$ drachm dried peel of Seville orange, 4 ounces diluted alcohol, and 12 ounces boiling water. These ingredients are first macerated for 3 hours with the alcohol, after which the water is added, and the maceration is continued for 2 hours more. The *Infusum Gentianæ compositum*, Ph. Ed. is made by first steeping half an ounce of gentian-root, one drachm of dried Seville orange-peel, and half a drachm of coriander-seeds, in four ounces of diluted alcohol, for three hours; afterwards adding a pound of water, and macerating without heat for 12 hours. In consequence of the previous addition of the spirit of wine, and the greater length of time given for the maceration, the 2 last infusions are stronger and more aromatic than that of the London college. Dose, from half an ounce to one ounce.—The *Tinctura Gentianæ composita*, Ph. Lond. (formerly called *Tinctura amara*) is made by digesting for eight days two ounces of gentian-root, one ounce of the dried outer rind of Seville oranges, and half an ounce of the lesser cardamom seeds in two pints of proof spirit. Dose, from one to three drachms.—The *Tinctura Gentianæ composita*, Ph. Ed. (vulgo Elixir Stomachicum) is made by macerating, for the space of seven days, two ounces of gentian-root, one ounce of dried Seville orange-peel, half an ounce of canella alba, and half a drachm of cochineal, in two pounds and a half of proof spirit. Dose, the same as of the preceding tincture.—The *Vinum Gentianæ compositum*, Ph. Ed. (formerly *Vinum Amarum*) is a combination of the Peruvian bark with this drug, and might, perhaps, more aptly have been termed *Vinum Cincho-*

næ cum Gentiana. But when this combination is desired, we conceive it to be much better to add extemporaneously to the decoction of the Peruvian bark a proper quantity of the common tincture of gentian, or to the common infusion of gentian a proper quantity of the tincture of Peruvian bark.—This Vinum Gentianæ compositum above mentioned, consists of gentian-root half an ounce, Peruvian bark one ounce, dried Seville orange-peel two drachms, canella alba one drachm. These ingredients are first steeped in four ounces of diluted alcohol for twenty-four hours; after which two pounds and a half of white wine are added, and the maceration is continued for seven days. Dose, from two drachms to half an ounce.—The *Extractum Gentianæ* of the 3 Pharmacopœias is made by evaporating the saturated and strained decoction of the root to a consistence fit for being made into pills; under which form it is frequently prescribed in all those cases in which the infusion and tincture are employed. Dose of this extract, from ten grains to half a drachm. It is seldom given alone, but generally in combination with aromatic and aloetic powders, with myrrh, vitriolated iron, &c. *Hartman Historia Gentianæ naturalis et medica*, 1777.

¶ *GEUM urbanum*. Icosandria Polygynia. Senticosæ. Indigenous. (Caryophyllata. Radix.) Herb Bennet. This bitter astringent root has, of late years, been employed in the northern parts of Europe as a substitute for the Peruvian bark, in the cure of intermittents, diarrhœas, &c. That it possesses some medicinal agency in these cases is

unquestionably true; but that it is equally efficacious, or nearly so, with the Peruvian drug for these and other purposes, we can by no means admit. It is even inferior in febrifuge virtues to some species of willow. Indeed, in this country which is so well supplied, through its extensive commerce, with the cinchona, angustura, cascarilla, and other more powerful exotic tonics; it is not likely that this species of geum or the geum *rivale* (for both have been recommended) will be held in much estimation. Dose in substance, from half a drachm to a drachm. In decoction, an ounce to a pint of water. *Buckhave* Observationes circa Radicem Gei urbani, 1781.

¶ *HUMULUS Lupulus.* (See p. 332.) Hop. Like other bitters, the hop has afforded relief in dyspeptic and gouty affections, given in the form of an extract or tincture; the former in doses of from 5 to 10 grains, twice a day; and the latter (the tincture) in doses of a drachm, once or twice a day. But in the cases above mentioned, does the hop possess any advantage over menyanthus, wormwood, or gentian?

¶ *INULA Helenium.* Syngenesia Polygamia superflua. Compositæ discoideæ. Indigenous. (*Enula campana.* *Helenium.* *Radix.*) Elecampane. The root of this plant is among the least efficacious of bitters and aromatics; and should be erased from the list of modern Pharmacopœias.

¶ *MARRUBIUM vulgare.* Didynamia Gymnospermia. Verticillatæ. Indigenous. (*Marrubium*

album. Herba.) White Horehound. This is a nauseous bitter, in no respect preferable to chamomile, wormwood, buckbean, or gentian; and may therefore well be expunged from the long list of tonic medicines.

MENYANTHES *trifoliata*. Pentandria Monogynia. Preciæ. Indigenous. (*Trifolium paludosum*. *Trifolium fibrinum*. Herba.) Buckbean or Marsh Trefoil. This is a good bitter. The dried herb may be employed in infusion in the same cases as chamomile, wormwood, and gentian. It is thought to be particularly useful in certain cutaneous diseases, in arthritic affections, and in remittent fevers. (*Thesaur. Med.* p. 198.) The proportions for making the infusion should be half an ounce of the dried herb to a pint of water.

MYRRHA. (See p. 276.) Myrrh. This gumresin is employed as a tonic with great advantage in most cases of debility, and especially in such as are accompanied with visceral affection, such as amenorrhœa, mesenteric disease, pulmonary consumption, &c. Joined with bitters and alkaline salts it has often removed remittent and intermittent fevers, after the Peruvian bark has failed. Moreover, it is useful in all convalescencies, combined with the cinchona and chalybeates. In cases of hysteria, chlorosis, and amenorrhœa, aloes, galbanum, vitriolated iron, &c. are added to it; and in pulmonary and hectic cases, it is joined with solutions of kali, neutralized with the vegetable acid; or with un-neutralized solutions of the alkaline salt. In the last mentioned disorders, a mixture of myrrh, prepared kali, and vitri-

olated iron, has long been in use; but in our own practice we have found a solution of the gum resin in pure water, with the addition of a due proportion of vitriolated zinc and tincture of opium, or tincture of digitalis, to have a much better effect, and to be less disagreeable to the palate. Besides, the chalybeated myrrh mixture gradually undergoes a chemical decomposition, which renders its strength and operation uncertain. (*Thesaur. Med.* p. 196.) In common cases of debility, this gum resin is given in doses from fifteen grains to a scruple; but where the chief reliance is placed upon it in intermittents, it is prescribed in larger quantities, *viz.* two scruples or a drachm at a time. For an account of the different preparations of myrrh, see p. 276, as above referred to. *Cartheuser de eximia Myrrhæ virtute medica*, 1746.

¶ PANAX *Quinquefolium*. Polygamia Dioecia. Chinese Tartary, and North America. (Ginseng. Radix.) Ginseng. A feeble stomachic undeservedly prized by the Chinese, and deservedly slighted by Europæan physicians. It is a superfluous article of the materia medica.

POLYGALA *amara*. Diadelphia Octandria. Lomentaceæ. Mountainous parts of France, Piedmont, Switzerland, &c. (Herba et Radix.) Bitter Polygala. Bitter Milkwort. This stomachic vegetable, though suited to general cases of debility, has been chiefly prescribed in consumptive disorders. Dose of the pulverized herb or root, from a scruple to a drachm. In decoction, an ounce of the fresh herb, or roots, to a pint and a half of water, boiled down

to a pint. Two ounces of this decoction may be taken at a time. An infusion of the dried herb is a better preparation. It may be given alone, or mixed with an equal quantity of the decoction of Peruvian bark.

QUASSIA amara. Decandria Monogynia. Grui-
nales. Surinam. (Lignum. Cortex. Radix.)
Bitter Quassy. This holds a principal place among
the simple bitters; and is prescribed with good
effect in various disorders of the stomach and intes-
tinal canal, whether with or without fever, as well
as in hysteria, periodic headach, and nervous irrita-
bility. It is particularly useful in the bilious com-
plaints of the hot climates. (*Thesaur. Med.* p.
199.) It is best administered in infusion; in the
proportion of two drachms of the grated wood,
bark, or root, to a pint of hot water. One ounce
of such an infusion may be given for a dose alone,
or combined in some cases with alkaline salts, (*Gib-
son on the Effects of Quassy and Natron in Bilious
Diseases*, 1799) in other cases with vitriolated zinc.
(*Lettson in Memoirs of the Med. Society*, Vol. 1.)
In hysterical affections it may be joined with cam-
phor or valerian; in gouty cases with absorbents
and aromatics, particularly ginger. In intermittents,
it is combined with the Peruvian bark and other
astringents. For rendering it less unpalatable, li-
quorice and spirit of cinnamon answer best.—Of
late years this drug has been very generally employed
in this country in public and private brewing, as a
substitute for hops, to the great prejudice of the
people's health. For although, as a simple bitter,
quassy is preferable to the hop for most medicinal

purposes, yet for æconomical uses, and particularly for brewing, the hop is greatly superior to the Surinam wood. Mere bitterness is not the only quality which is wanted in brewing, nor the only one which the hop possesses; it is also astringent and aromatic, to a considerable degree—properties which greatly increase its antizymic powers, and which are altogether wanting in the quassy. Hence malt liquor bittered with this last vegetable is not only less depurated, less clear; but is at the same time apt to run into the acetous fermentation, and to lose all its mild and nourishing qualities. It spoils in half the time that hopped malt liquor does. This circumstance has contributed in no small degree to those bowel complaints which have prevailed so much during the last seven or eight years. *Linnæus* de Ligno Quassiæ, 1763, and reprinted in Vol. VI. of the *Amœnitates Academicæ*.

QUASSIA Simarouba. Class and order as above. Cayenne, Guiana, &c. Arbor. (*Simarouba. Simarouba. Cortex.*) *Simarouba.* The bark of this tree, which is bitter without being astringent, has been successfully employed in diarrhœas, and the advanced stage of dysentery. (*Jussieu, Degner, Pringle, Zimmerman, Monro, Wright.*) It is best given in the form of a decoction, in the proportion of two or three drachms to a pint of water. Some prefer a weaker decoction. (*Thesaur. Med.* p. 201.) Large doses excite vomiting. In some cases opium, in others cascarilla, is advantageously joined with it. *Jussieu* in the *Memoirs of the French Academy*, 1727, and in a Latin dissertation with the title, *An in fluxibus alvi inveteratis Simarouba?* 1730.

QUERCUS Robur. (See p. 352.) The Common Oak. As we have already noticed under Astringents, some practitioners have proposed the employment of this bark, combined with bitters and aromatics, for the cure of agues and various diseases of debility, in place of the cinchona; but where the Peruvian drug can be procured, it should always be preferred. Dose of the pulverized bark from fifteen grains to half a drachm.

SALIX alba. Diœcia Diandria. Amentaceæ. Arbor. Indigenous. (Cortex.) The White Willow. Long experience has shown that the bitter-astringent bark of this, and several other species of Willow, is capable of supplying the place of the cinchona, in the cure of intermittents and remit-tents, in cases of convalescency, in debilities of the stomach and intestinal canal, in cachectic and drop-sical cases, &c. In pulmonary hæmorrhage and in phthisical and hectic disorders, it often agrees better than the Peruvian bark. Of its use in the last-men-tioned cases, *Coopmans* in his *Oratio de Medicamen-tis indigenis* (Vide ejus *Opusculorum Physico-Med.* Tom. I.) says "*omnibus quæ aut Asia tulit, aut Africa, aut America, medicaminibus longe præstat: hujus [nempe Salicis] enim cortice non modo recidivas Hæmoptoës, sed et imminentem Phthisin sæpius sana-tam vidimus.*" Certainly if there be any European ve-getable capable of answering all the medical purpo-ses of the Peruvian bark, it is this. Of the pul-verized willow, from half a drachm to a drachm may be given for a dose; but it is best pre-scribed in decoction, in the proportion of an ounce and a half or two ounces, to a pint and a half of

water boiled down to a pint. It is variously combined with other auxiliaries, in the same manner as the cinchona. *Stone* in Vol. LIII. of the Phil. Trans. 1763. *Gunz* de Cortice Salicis Cortici Peruviano substituendo, 1772. *James* on the efficacy of the Willow bark in intermittents; 1793. *White's* Observations on the Willow bark, 1798. *Wilkinson's* Experiments and Observations on the Willow Bark, 1803.

SALIX fragilis. The fragile Willow. Class and order as above. This and several other species of the willow possess the same medicinal virtues as the *salix alba*; what has been said of that will therefore apply to the others.

SWIETENIA febrifuga. Decandria Monogynia. Trihilatae. Arbor. East-Indies. (Cortex.) Febrifuge Mahogany. The bark of this species of *swietenia* is said to be a good substitute for the Peruvian bark. Dose, half a drachm. In decoction six drachms to a pint of water. In some parts of the East Indies where the cinchona is not procurable, this bark may be useful; but it is not probable that it will be in much request or estimation here. *Roxburgh's* Plants of the coast of Coromandel, 1795. To the bark of the common Mahogany (*Swietenia Mahogani*) similar medicinal powers have been attributed. *Murray's* Apparatus Med. Vol. VI. and Medical Facts and Observations, Vol. VI. *Duncan* de *Swietenia Soymida*, 1794.

TANACETUM vulgare. Syngenesia Polygamia Superflua. Compositae discoideae. Indigera.

(Herba et Flores.) Tansy. What has been said of wormwood and buckbean, will apply to this bitter vegetable. It is commonly given in infusion. *Thesaur. Med.* p. 198.

VINUM rubrum Portugalicum. Red Port Wine. Properly managed, Red Port is an excellent strengthening medicine in intermittent, low and malignant fevers. (*Huxham, Pringle, Cullen, Monro, Blane, Trotter, Smyth, Fordyce.* See ANTISEPTICS) in convalescencies from all fevers; in cachexia, leucorrhœa, diabetes; in certain convulsive affections, such as chorea, tetanus, hydrophobia; and generally in those cases in which the Peruvian bark is required. The quantity to be allowed must be regulated by the age and constitution of the patient, and the nature of the disease. In low and malignant fevers, and in tetanus, several pints have been given in the course of twenty-four hours; but in ordinary cases of debility, a few glasses (alone or diluted with water) within that space of time, will suffice.—Where Red Port disagrees, Sherry or Maderia (lowered with water) may be used in its stead.—Some prefer Claret or Rhenish (See STIMULANTS.) *Buchner de Vino, ut medicina, 1756.*—In small quantities Brandy (*Spiritus vini gallicus*) or common Malt-Spirits (*Spiritus Frumenti*) diluted with water, produce the same tonic effects as wine; and in certain debilities of the stomach and intestinal canal, and especially in gouty and hysterical

cases, they answer better than wine. *Linnaeus* de Spiritu Frumenti, 1764, and reprinted in Vol. VII. of the *Amœnitates Academicæ*.

ACIDUM nitrosum, Ph. Ed. Lond. et Eblan. Nitrous Acid. Obtained according to the formula of the Lond. Coll. by mixing sixty ounces (by weight) of purified nitre with twenty-nine ounces (by weight) of vitriolic acid, and distilling: According to the Edinb. formula, by putting two pounds of purified nitrate of potass coarsely pulverized, into a glass retort, pouring upon it sixteen ounces of sulphuric acid, and distilling in a sand bath, gradually increasing the fire, until the iron pot is of a dull red heat. In the Dublin formula, the proportions are, nitre 6lbs. vitriolic acid 3lbs. mixed together and distilled till the residuum becomes dry. In this process the vitriolic acid (sulphuric acid) seizes the alkaline basis of the nitre (nitrate of potass) and disengages its acid which passes over into the receiver. The residuum at the bottom of the retort is vitriolated kali (sulphate of potass.) *Nitric acid* (*Acidum Nitricum*, Ph. Ed.) is obtained from the nitrous acid, by pouring the latter into a retort, adapting a receiver, and subjecting it to a gentle heat, until the reddest portion of the acid shall have passed over into the receiver, and that which remains in the retort appears colourless. This nitric acid, in doses of thirty or forty drops, diluted with water, has an evident tonic effect, and promises to be of use in various cases of debility, whether with or without fever; such as typhus [see ANTISEPTICS] dropsy, jaundice, &c. But within the last eight or ten years it has been brought forward as a remedy

against the venereal disease; and in that point of view has given rise to much controversy among medical practitioners. In this disease it has been given in a much larger quantity than that above-stated, as we shall afterwards mention.

Mr. Scott, a Surgeon in the East-India service, first announced the antisyphilitic powers of this acid in the *Bombay Courier*; and afterwards sent an account of his successful employment of it to *Dr. Beddoes*; at whose recommendation trials were soon made by various physicians and surgeons, and the result thereof communicated to the public by the last-mentioned Author in his Reports concerning the effects of Nitrous Acid, 1795, in his Collection of Testimonies respecting the Treatment of the Venereal Disease, 1799, in his Contributions to Medical and Physical Knowledge, 1799, and in his Communications respecting the external and internal use of Nitrous Acid, 1800. From these cases, as well as from others published by *Dr. Rollo*, (in his Treatise on Diabetes, 1798) it would appear that this acid has greatly mitigated the venereal symptoms in many cases, and has removed them in others; while in some it has failed. It is given to syphilitic patients in doses of two or three drachms daily, diluted with as many pints of water and sweetened with syrup. This treatment is continued for several weeks if necessary; and the whole quantity of acid thus taken has sometimes amounted to twelve, fourteen or sixteen ounces. During its use the urinary secretion is increased; sometimes the gums and salivary glands are affected; and generally the appetite and spirits are improved. Pain of the stomach

or disordered bowels show that the acid is overdosed.

It would have been a happy event for mankind, as many and serious evils arise from the abuse of mercury, if this new remedy had stood the test of more extensive trials; but unfortunately it has not succeeded in other hands; as appears from the facts stated by *Mr. Blair* (*Essays on the Venereal Disease*, Part. I. and II. 1799, 1800) and by *Mr. John Pearson*, Surgeon to the Lock Hospital (*Observations on the Effects of various articles in the materia medica in the cure of the Lues Venerea*, 1800.) These gentlemen assert that in the majority of cases of confirmed syphilis, the nitric acid affords but little relief; and that in those instances in which it has caused the symptoms to disappear for a time, they have afterwards returned; thus producing only a temporary and fallacious cure. It cannot, therefore, they contend, supersede the use of mercury in the venereal disease; although in some instances it may be advantageously given in conjunction with that metal; or after a mercurial course, for the removal of weakness and certain painful affections of which such patients often complain. Temperature has a surprising influence on chemical agents of this nature; so that it is not inconceivable that in the warm climates of the East and West-Indies, the nitric acid may suppress or remove venereal affections which resist it here. This acid has been employed externally in the form of a bath and wash, as well as internally in these and other cases. What has been above said concerning the use of the nitric acid in the venereal disease will

equally apply to the muriatic acid, the oxymuriatic acid, the oxymuriate of potash, and other similar substances abounding in oxygen, which have lately been proposed as antisypilitics.—The *Acidum Nitrosum dilutum*, Ph. Lond. Ed. et Eblan. is prepared by mixing together equal quantities by weight of the acidum nitrosum and water. A drachm or two may be given for a dose.

(2) *From the Mineral Kingdom.*

Acidum vitriolicum, Ph. Lond. et Eblan. *Acidum sulphuricum*, Ph. Ed. (see p. 339.) Vitriolic Acid. Sulphuric Acid. Obtained either by distilling vitriolated iron (sulphate of iron) in a strong heat, or by burning sulphur in vessels constructed for the purpose. This acid, in its concentrated state, is not used in medicine; but when duly diluted with water it is employed in various diseases. The *Acidum vitriolicum dilutum*, Ph. Lond. consists of vitriolic acid one part (by weight) and water eight parts (by weight.) Dose from fifteen to forty drops. The *Acidum sulphuricum dilutum*, Ph. Ed. consists of sulphuric acid one part, water seven parts. It is therefore stronger than that of the Lond. College. Dose, from ten to thirty drops. The *Acidum Vitriolicum dilutum*, Ph. Eblan. consists, like that of the Ed. college, of one part vitriolic acid and seven parts water. The diluted vitriolic acid is, in common with other acids, an useful medicine in low and malignant fevers (see ANTISEPTICS); in the colliquative sweats which occur in hectic fever, in menorrhagia, in large suppurations, and in convalescencies from most fevers. In these cases it is

added to decoctions of cinchona, bitter-infusions, infusion of roses; or the acid is previously combined with spices, as in the instance of the *Acidum Sulphuricum aromaticum*, Ph. Ed. formerly Elixir vitrioli acidum (see ANTISEPTICS) In certain cutaneous diseases, the diluted vitriolic acid has been successfully administered in large doses, such as sixty, eighty, or a hundred drops for a dose, mixed with considerable quantities of mucilaginous liquors, or with syrup and water. (*Smyth* in Vol. I. of Medical Communications.) This acid is often added to astringent and antiseptic gargles.

ARGILLA vitriolata. Alumen, Ph. Lond. et Ebl. *Sulphas Aluminæ*, Ph. Ed. (See p. 358.) Vitriolated Argill. Alum. Sulphate of Alumina. This saline substance has been sometimes prescribed with good effect in intermittent fevers, joined with chamomile, gentian, myrrh, or Peruvian bark. (*Thesaur. Med.* p. 157). Some practitioners have combined it with nutmeg in these cases (*Ibid.* p. 156) but for this purpose canella alba or ginger is a preferable aromatic. Five or ten grains of the alum may be given for a dose. After all, vitriolated zinc will generally answer better for the cure of agues than this salt. In the colica pictonum, alum has been administered in larger doses, viz. fifteen or twenty grains (*Percival's Essays*, Vol. II. and *Quarin Animadversiones practicæ*, p. 187) combined with mucilages and opium. *Mayerne* gave it as a strengthening medicine in dropsies. For other observations on the uses of this article, see ASTRINGENTS; where are enumerated the various officinal preparations of which it is an ingredient.

ARSENICUM album. White Arsenic. Considered as an oxyd of arsenic, by some chemists, and as concrete arsenious acid by others. Like many other poisons white arsenic has been exhibited internally in minute doses for the cure of various disorders; but particularly for the cure of intermittent and remittent fevers (*Friccius de virtute venenorum medicâ*, 1717. *Molitor de Febre continuâ maligna et intermittente*, 1736. *Jacobi* in the *Acta Acad. Mogunt.* Vol. I. 1751, and *Fowler's Medical Reports on the Effects of Arsenic*, 1786) whooping-cough (*Ferriar's Medical Histories*, Vol. III. and *Duncan's Annals*, Vol. II.) chronic rheumatism (*Bardsley's Med. Reports*, 1807) and hydrophobia (*Simmons' Medical Journal*, Vol. x); not to mention its internal and external use in cancers (*Le Febure remede pour guerir le cancer*, 1775. *Rush's Medical Inquiries*, Vol. I. and *Justomond* on Cancerous disorders, 1780) and in elephantiasis, and some other cutaneous affections. In these cases it has been given either in its solid or concrete state made into pills (a most dangerous practice!); or in a state of solution, combined with the vegetable alkali, the only way in which it should ever be administered internally. This solution is prepared, according to *Jacobi*, by boiling ten grains of white arsenic, and two drachms of salt of tartar, in four ounces of water, until half the water is evaporated. When cold, as much water as has been lost in the boiling is to be added, and a small quantity of spirit of wine. Dose to adults from fifteen to twenty drops three times a day; to children and young persons from five to ten drops, repeated in the same manner. *Fowler's* solution is made by boiling thirty-two grains of white arsenic reduced to a fine powder, and an equal

quantity of prepared kali in four ounces of water; afterwards adding to the solution when cold, four ounces more of water and two drachms of spirit of lavender. This is called *The Mineral Solution*, (Solutio Mineralis) and is given to children in doses of two to six drops; to adults in doses of ten, twelve, or fifteen drops three times a day.—Would it not be an improvement if the solution were prepared with a double proportion of alkali and water, increasing the number of drops given at a dose, accordingly?—It is scarcely necessary to remark that this as well as *Jacobi's* preparation, is a solution of arseniated potash or arseniated kali; the vegetable alkali uniting during the boiling with the arsenious acid and forming with it a neutral salt, when the quantity of alkali employed is sufficient for that purpose.

Various British practitioners, besides those above referred to, have not scrupled to prescribe this solution in intermittent fevers, and the other cases before-mentioned; asserting that under a cautious and limited exhibition, it has removed those disorders without producing any bad effects upon the constitution. Others on the contrary (*Monro, Baker, de Haen, Stoerck, Quarin*) have condemned its use from a consideration of its poisonous nature, and the mischief and danger they have known it to occasion: Nor can it be denied that the most fatal consequences may arise from its unguarded and long-continued use. Perhaps it should only be resorted to in such obstinate cases as resist the cinchona and other less formidable remedies; and in no instance should its exhibition be persisted in beyond three or four days in succession. It should

then be suspended for a week or less, and repeated again, if necessary, for three days more; after which it should be entirely laid aside: Otherwise a condition worse than the disease which it is intended to cure, may be induced. Loss of appetite, sickness, tremors, cough, twitching pains in the stomach and bowels, or a looseness, are signs of an over dose. *Wedel de Arsenico*, 1719. *Gmelin's Apparatus Medicaminum*, Vol. I.

BISMUTHI oxydum album. White Oxyd of Bismuth. See ANTISPASMODICS.

CUPRUM vitriolatum. Vitriolum cœruleum, Ph. Lond. et Eblan. *Sulphas Cupri*, Ph. Ed. (See p. 360.) Vitriolated Copper. Sulphate of Copper. Blue Vitriol. This metallic salt has been employed for the cure of agues by some practitioners in doses of a quarter of a grain repeated three or four times a day. For this purpose it may be made into pills with the extract of cinchona, in the manner directed by *Dr. Donald Monro* (Med. and Pharmaceutical Chemistry, Vol. I.) Vitriolated copper has also been given in epilepsy and other convulsive affections; but vitriolated zinc in larger doses will be found to cure these disorders and intermittents, as speedily as the cupreous salt; and being of a less injurious nature should at all times be preferred.

FERRUM. Mars. (See p. 280.) Iron. It is the remark of a celebrated chemist and physician, that iron is perhaps the only metal among those which possess a medicinal agency, that does not belong to the class of poisons. There is this further peculiarity with regard to iron, viz. that it is a constituent

part of the blood, and is, in fact, the colouring principle of that vital fluid. It is also present in the muscular fibres, some atoms of it being always detected in the destructive analysis of those parts. Hence it is evident that this metal performs important offices in the animal body; and that material alterations must be produced as it is present in greater or less quantity. And certainly it holds a principal place among those substances which increase the energy of the digestive organs, of the arterial and absorbent systems, and of the fibres destined for the movement of the limbs and other parts of the body. Thus it is very successfully prescribed in all cachectic and leucophlegmatic constitutions; in chlorosis and hysteria; in gouty affections and dyspepsia, whether proceeding from hard drinking or other causes; in venous hæmorrhage, fluor albus, gleet and diabetes; in scrophulous, ricketty and phthisical cases; in mesenteric obstructions, jaundice and dropsy; in intermittent fevers, and in convalescencies from most fevers. Its use in deficient and suppressed menstruation has been already noticed under the class of Emmenagogues. Concerning its action as a vermifuge, see Anthelmintics. Where there is much fulness of the vessels, or a tendency to inflammatory action, or a bilious and loaded condition of the stomach and intestinal canal, this metal and its preparations are highly improper; nor is it suited to every form and stage of the diseases above enumerated. It is a proof that chalybeate medicines disagree, if the person who is taking them complains of heat, thirst, drowsiness, head-ach, costiveness, tightness of the breath, &c.

The medicinal efficacy of this metal is often frustrated by over dosing it. In general it answers best when it is gradually introduced into the system, by administering it for a considerable length of time in small quantities, and in a state of minute division by watery solution. Hence the beneficial operation of certain chalybeate springs hereafter mentioned. It is scarcely necessary to add, that, in order to produce the full effect of iron upon the diseased constitution, its action should be assisted by exercise. With these attentions great and permanent advantages may be derived from it in the disorders above-mentioned.

Iron is variously combined according to the different nature of the disorder in which it is prescribed, with bitters, astringents, aloetics, diuretics, opiates. The *limatura* and *rubigo* (see p. 280, 281) are the least active forms in which iron can be given, and consequently the least adapted to the generality of cases in which a chalybeate is required. They are chiefly suited to those diseases of debility which are accompanied with acidity in the stomach and bowels. Their doses have been mentioned in the place referred to. The *Ferrum ammoniacale*, Ph. Lond. *Murias Ammoniacæ et Ferri*, Ph. Ed. and *Tinctura Ferri ammoniacalis*, Ph. Lond. (see p. 281) have been employed in epileptic, hysterical, chlorotic and scrophulous cases; also in rickets and mesenteric obstructions; but whether they are preferable in any of these instances to vitriolated or muriated iron may be doubted. Their doses have been mentioned at the place referred to. The *Tinctura Ferri muriati*, Ph. Lond. *Tinct. Muriatis*

Ferri, Ph. Ed. (see p. 283) is an active and useful preparation; and is suited to almost every case in which a chalybeate is required; but more especially to cachectic and scrophulous affections; to hæmorrhages and fluor albus; to jaundice and dropsy. It has likewise been administered with great success in spasmodic dysury. (*Cline* in Medical Records and Researches.) The preparations and doses have been mentioned at the place above referred to. The *Ferum tartarisatum*, Ph. Lond. has been already noticed at p. 282.

FERRUM *vitriolatum*, Ph. Lond. et Eblan. *Sulphas Ferri*, Ph. Ed. (Sal Martis.) Vitriolated Iron. Sulphate of Iron (Salt of Steel.) Of late years this chalybeate salt has been much used in phthisical cases, combined with myrrh; and very unchemically (see *Thesaur. Med.* p. 196) with vitriolated kali also. In such cases (*viz.* those of phthisis pulmonum) it often proves too stimulant and heating, in whatever manner it may be combined, in consequence of being administered at an improper time—while some degree of inflammatory action subsists: And though it proves serviceable where no such forbidding circumstance is present; yet is it generally less availing in pulmonary consumption than vitriolated zinc. In all other respects it is applicable to the same cases as the other preparations of iron. Dose, from one to six grains. *Nebel de Medicamentis Chalybeatis*, 1711, and reprinted in *Haller's Disputationes*, Vol. VII. *Buchner de viribus et usu Ferri in medicina*, 1749

The mineral waters of Hampstead, Islington,

Tunbridge, &c. of this country; those of Forges, Bussang, Aumale, Passy, &c. in France; those of Pymont, Spa, &c. in Germany, owe their medicinal virtues to the iron dissolved in them, either by the carbonic acid (fixed air) or vitriolic acid. It is also probable that their chalybeate impregnation has a considerable share in the beneficial effects produced by the hot waters of Bath, and the purgative waters of Cheltenham. *Monro's Pharmaceutical Chemistry*, Vol. II. and *Saunders on Mineral Waters*, 1800.

ZINCUM calcinatum, Ph. Lond. *Oxidum Zinci*, Ph. Ed. *Calx Zinci*, Ph. Eblan. (*Flores Zinci*.) Calcined Zinc. Oxyd of Zinc. Flowers of Zinc. See ANTISPASMODICS.

ZINCUM vitriolatum, Ph. Lond. et Eblan. *Vitriolum Album*. *Sulphas Zinci*, Ph. Ed. (See p. 362.) Vitriolated Zinc. White Vitriol. Sulphate of Zinc. This is a valuable tonic medicine, suited to the same cases as the saline preparations of iron, but in many disorders preferable to them, being less stimulant and heating. In particular, it is more efficacious in certain periodic affections such as intermittent fevers (*Blane's Diseases of Seamen*) in certain convulsive disorders such as whooping-cough, chorea, and epilepsy; in debilities of the stomach and intestinal canal; in fluor albus, spitting of blood and uterine hæmorrhage (see ASTRINGENTS) and in phthisis pulmonalis. Dose, from one to three or four grains. In larger doses it acts as an emetic. It may be given either in pills, or dissolved in pure water, or in some of the distilled aromatic waters.

It is joined with bitters, astringents and opiates, according to the nature of the complaint in which it is prescribed. Myrrh, ammoniacum, rhubarb, cicuta, and digitalis, are useful adjuncts to it in pulmonary cases; alum (*Mosely* on tropical Diseases) and mucilages in diarrhoeas and the advanced stages of dysentery. *Crell de Zinco medico recentius observata*, 1780.

Gas oxygenium. Oxygen gas. Although the inhalation of this gas, duly diluted with common air, has disappointed the expectations that were raised concerning it in certain forms of debility, such as chlorosis, epilepsy, &c. yet in other states of bodily weakness, such as asthmatic and hydropic affections, it has been administered with at least temporary relief. Yet it must be confessed that even in these cases, other powerful medicines have generally been given in conjunction with it; so as to leave it doubtful what quota of the obtained benefit was due to this gas.—Considering its chemical properties, it is reasonable to suppose it might be evolved from a mixture of black oxyd of manganese and vitriolic acid subjected to a due degree of heat, and conveyed from an adjoining room to the bed-side of persons labouring under typhus, malignant small-pox, and gangrenous sore throat, with considerable advantage.

Balneum frigidum. The Cold Bath is a power-

fully tonic remedy in many disorders ; but it is a remedy which is often misapplied, as it is not suited to every form of debility. Used by persons in health it proves an excellent preservative against epidemic diseases and the exhausting action of the summer and autumnal heat ; but it is inadmissible in dyspeptic cases, and where there is much disease in the abdominal viscera ; also in chlorotic and ricketty subjects : And generally persons of very delicate constitutions are not equal to sustaining the shock and sudden abstraction of heat occasioned by immersion in water of a temperature considerably below that of the living body. To such cases the tepid bath is best adapted. *Hoffman* de Balnearum Usu, 1721. *Saunders* on the Cold Bath, in his treatise on Mineral Waters.

The tonic action of cold water is heightened, when it is impregnated with salt ; hence bathing in the sea generally proves more strengthening than bathing in the common cold bath.

Respecting the external application of cold water in cases of fever, see REFRIGERANTS ; where reference is made to other treatises on cold bathing, besides those above quoted.

TABULAR VIEW
OF
THE CONTENTS OF CLASS VIII.

STIMULANTS.

(1) *From the Animal Kingdom.*

AMMONIA, ejusque Præparata. Volatile Alkali and its Preparations.

MOSCHUS *moschiferus*. The Musk Animal.

MELOE *vesicatorius*. Spanish Fly.

PHOSPHORUS, ejusque Acidum. Phosphorus and its Acid.

(2) *From the Vegetable Kingdom.*

¶ ACORUS *Calamus*. Sweet Flag.

ALLIUM *sativum*. Garlick.

AMOMUM *repens*. Lesser Cardamom.

———— *Zingiber*. Ginger.

¶ AMYRIS *Elemifera*. Elemi-tree.

———— *Gileadensis*. Balsam of Gilead.

ANETHUM *Feniculum*. Sweet Fennel.

———— *graveolens*. Dill.

ANTHEMIS *Pyrethrum*. Pellitory of Spain.

ARISTOLOCHIA *Serpentaria*. Virginian Snakeroot.

ARNICA *montana*. Leopard's bane.

ARUM *maculatum*. Wakerobin.

BUBON *Galbanum*. Galbanum.

CANELLA *alba*. Canella Alba.

CAPSICUM *annuum*. Red Pepper. Cayenne Pepper.

CARUM *Carni*. Carraway.

CISTUS *Creticus*. Labdanum.

CITRUS *Aurantium*. The Orange.

- CLUTIA *Eluteria*. Cascarilla.
 COCHLEARIA *officinalis*. Scurvy-grass.
 ———— *Armoracia*. Horse-radish.
 COPAIFERA *officinalis*. Balsam of Copaiva.
 CORIANDRUM *sativum*. Coriander.
 ¶ CUMINUM *Cyminum*. Cumin.
 DAPHNE *Mezereum*. Mezereon.
 DORSTENIA *Contrajerva*. Contrayerva.
 ERYNGIUM *maritimum*. Eryngo.
 EUCALYPTUS *Piperita*. Peppermint-tree.
 EUGENIA *caryophyllata*. Clove.
 FERULA *Assafætida*. Assafætida.
 GUAIAIACUM *officinale*. Guaiacum.
 ¶ INULA *Helenium*. Elecampane.
 JUNIPERUS *communis*. Juniper.
 ———— *Lycia*. Olibanum.
 ———— *Sabina*. Savin.
 KÆMPFERIA *rotunda*. Zedoary.
 LAURUS *Camphora*. Camphor.
 ———— *Cinnamomum*. Cinnamon-tree.
 ———— *Cassia*. Cassia.
 ———— *nobilis*. Bay-tree.
 ———— *Sassafras*. Sassafras.
 LAVANDULA *Spica*. Lavender.
 ¶ MARANTA *Galanga*. Galanga.
 MELALEUCA *Leucadendron*. Cajaputa-tree.
 MELISSA *officinalis*. Balm.
 MENTHA *Piperita*. Peppermint.
 ———— *viridis*. Spearmint.
 ¶ ———— *Pulegium*. Pennyroyal.
 MYROXYLON *Peruiferum*. Balsam of Peru.
 MYRTUS *Pimenta*. Jamaica Pepper.
 ORIGANUM *vulgare*. Wild Marjoram.
 ¶ ———— *Majorana*. Sweet Marjoram.
 ¶ PASTINACA *Opopanax*. Opopanax.
 PIMPINELLA *Anisum*. Aniseed.
 PINUS *sylvestris*. The Scotch Fir.
 ¶ PIPER. *Cubeba*. Cubeb.
 ———— *longum*. Long Pepper.
 ———— *nigrum*. Black and White Pepper.
 PISTACIA *Lentiscus*. Mastich.
 ———— *Terebinthus*. Turpentine-tree.

PTEROCARPUS *Draco*. Dragon's blood.
 RHODODENDRON *Chrysanthum*. Rhododendrum.
 RHUS *Toxicodendron*. Poison Oak.
 ROSMARINUS *officinalis*. Rosemary.
 SAGAPENUM. Sagapenum.
 SALVIA *officinalis*. Sage.
 SINAPIS *nigra et alba*. Mustard.
 STYRAX *Benzoe*. Benzoin-tree.
 || ——— *officinalis*. Storax-tree.
 TOLUIFERA *Balsamum*. Balsam of Tolu.
 VALERIANA *officinalis*. Wild Valerian.
 WINTERANA *aromatica*. Winter's bark.

PETROLEUM. Rock Oil.
 ÆTHER *vitriolicus*. Æther *sulphuricus*, ejusque Præparata.
 Vitriolic Æther. Sulphuric Æther, and its preparations.

CEREVISIA. Malt Liquor.
 VINUM, ejusque Spiritus. Wine and Spirit of Wine.

(3) *From the Mineral Kingdom.*

FERRUM, ejusque Præparata. Iron and its Preparations.

AQUA *calida*. Hot Water.
 THERMÆ *Bathonica*. The Bath Waters.
 BALNEUM *cælidum*. Hot Bath.
 ——— *Vaporis*. Vapor Bath.

GAS OXYGENIUM. Oxygen Gas.
 ELECTRISATIO. Electrification.
 GALVANISATIO. Galvanisation.

CLASS VIII.

STIMULANTS.

MOST of the articles of the materia medica might, in an extended sense, be called Stimulants; but this term is, by the general consent of physicians, restrictively applied to those medicines which possess the power of sustaining or increasing the vital energies—of rousing and invigorating the action of the heart and arteries—and of restoring to the muscular fibre, when affected with torpor, its lost sensibility and power of motion. Hence the use under proper regulations of the various articles belonging to this class, in cases of gout, palsy, and typhoid fever; but let it be repeated, under proper regulations; for we cannot but remark, that medicines which give additional activity to the circulation, and which augment the heat and sensibility of the system throughout, are often abusively employed, being administered too early as well as too freely in the above mentioned and some other similar disorders. In the beginning of typhus fever in particular, it cannot be doubted that a hasty and lavish exhibition of such medicines has, in numerous instances, aggravated every symptom, and brought

the patient, who would otherwise have had the disease in its mildest form, into considerable danger.

(1) *From the Animal Kingdom.*

AMMONIA *præparata*, Ph. Lond. *Carbonas Ammoniae*, Ph. Ed. *Alkali Volatile mite*, Ph. Eblan. Prepared Ammonia. Carbonate of Ammonia. Mild Volatile Alkali. The mode of preparation has been already described at p. 237. When taken into the stomach in sufficient quantity, its stimulant effects are soon produced, but then they are soon over. Its action is not like that of alcohol, followed by dejection and languor; and it has this advantage over many other stimulants, that it passes off readily by perspiration. See DIAPHORETICS. For other observations on the medicinal properties of the ammonia *præparata*, see ABSORBENTS and ANTISPASMODICS. Dose, from five to fifteen grains. The *Sal Cornu Cervi* (Salt of Hartshorn) Ph. Lond. differs from the ammonia *præparata* in no other respect than in having an admixture of empyreumatic oil. It is given in the same cases and in the same doses. Of the *Aq. Ammoniae*, Ph. Lond. *Aq. Carbonatis Ammoniae*, Ph. Ed. *Liquor Alkali Volatilis*, Ph. Eblan. the preparation has been described at p. 238. Dose, from thirty to eighty drops. The *Liquor Vol. Cornu Cervi*, Ph. Lond. *Liquor Volatilis Cornu Cervini*, Ph. Eblan. differs from the aqua ammoniæ, Ph. Lond. in no other respect than in having some admixture of empyreumatic oil. It is given in the same cases and in the same doses. *Aqua Ammoniae puræ*, Ph.

Lond. *Aqua Ammonia*, Ph. Ed. *Liquor Alkali Volatilis Caustici*, Ph. Eblan. (See ABSORBENTS.) In like manner may be employed the *Sp. Ammonia*, Ph. Lond. *Alkohol Ammoniatum*, Ph. Ed. *Spiritus Alkali Volatilis*, Ph. Eblan. (formerly called *Sp. Salis Ammoniaci dulcis*) for the preparation of which see p. 238. It is sometimes added to gargles in inflammatory angina. The *Sp. Ammonia compositus*, Ph. Lond. *Alkohol Ammoniatum Aromaticum*, Ph. Ed. *Sp. Alkali Volatilis Aromaticus*, Ph. Eblan. is the last mentioned preparation, with the addition of the essential or volatile oils of certain aromatic vegetables. The aromatic ingredients in the preparation of the London college are the essential oils [volatile oils] of lemon peel and of cloves: the aromatic ingredients in the Edinburgh preparation are the volatile oils of rosemary and of lemon-peel. In the Dublin pharmacopœia, they are the essential oils of lemon and nutmeg. The Ed. and Dublin preparations are the most aromatic. Dose of either, from fifteen to sixty drops. The *Sp. Ammonia succinatus*, Ph. Lond. (formerly called *Sp. Salis Ammoniaci succinatus*) is prepared by first dissolving ten grains of soap and one scruple of oil of amber in one ounce of alkohol, and afterwards adding four ounces of water of pure ammonia. It is supposed to be the same with the celebrated French preparation called Eau de Luce, and is used both internally and externally in convulsions, delirium, asphyxia, paralysis, chronic rheumatism, and in the bites of vipers and other venomous animals. While it has been applied externally to the wounded part, it has been administered at the same time internally, diluted with wine or water, in doses of five, ten, or

twenty drops, in cases of viper-bites, and the bite of a mad dog. The testimony in favor of its efficacy in the latter case is not the most satisfactory; but in cases of viper-bites it has been employed very successfully (*Duncan's Commentaries* for 1788 and 1789); and although it failed in the experiments of the Abbé Fontana, yet it seems, from a general review of the evidence respecting it, to resist more powerfully than any other known remedy the life-destroying action of the viper's poison. This and the before mentioned preparations are also used as stimulating odoramenta, in cases of delirium, hysteria, &c. *Sp. Ammoniacæ foetidus*, Ph. Lond. *Alcohol Ammoniatum foetidum*, Ph. Ed. *Sp. Alkali Volatilis foetidus*, Ph. Eblan. (Formerly called *Sp. Volatilis foetidus*.) See ANTISPASMODICS.—*Linimentum Ammoniacæ*, Ph. Lond. (formerly called *Linimentum Volatile*) is compounded of water of ammonia one part, olive-oil three parts. This liniment proves an useful application when rubbed upon the skin, in cases of fixed or deeply seated pain and inflammation. It is a well-known epithem in cases of inflammatory angina, in which cases it is spread upon a piece of thick flannel and applied round the throat. (*Thesaur. Med.* 3d Edition, p. 238.) The *Linimentum Ammoniacæ fortius*, Ph. Lond. consists of water of pure ammonia one part, olive-oil two parts. The *Oleum Ammoniatum*, Ph. Ed. consists of the same ingredients, but in different proportions, viz. one part of the water of ammonia, (i. e. water of pure ammonia, Ph. Lond.) to eight parts of olive-oil. Camphor and opium are frequently added to these liniments in extemporaneous prescriptions.

Moschus moschiferus. The musk-deer. *Moschus*. The peculiar scented secretion of this animal is termed musk. See ANTISPASMODICS.

MELOE vesicatorius. [*Lytta vesicatoria*.] (*Cantharis*.) Insecta Coleoptera. Spanish fly. Southern parts of Europe. *Cantharides* or Spanish flies are stimulant and irritating in so great a degree, that their internal exhibition requires to be conducted with the utmost caution; otherwise inflammation in the stomach, intestines, or urinary passages, may be the consequence. Of their internal use in dropsical cases, notice has been taken under DIURETICS. It belongs to this place to mention their exhibition in incontinence of urine, proceeding from paralysis vesicæ, in gleet, fluor albus, diabetes, and other diseases of the urinary passages, originating in or connected with debility. Not only in the incontinency of urine which accompanies a palsy of the lower extremities, but also in the incontinency of urine which is occasioned by an overdistension of the bladder, these flies have been administered internally with evident relief. (*Carmichael Smyth* in *Med. Communications*, Vol. II.) The same beneficial effects have followed their use in ischuria vesicalis, or suppression of urine from overdistension of the bladder. (*Yonge* in *Phil. Trans.* Vol. XXIII. No. 280; *Werlhof* *Oper. Med.* à *Wichman*, pp. 698—699; and *Carmichael Smyth* as before quoted.) They are recommended as an excellent remedy in gleet, by *Mead* and *Werlhof*; and the last mentioned physician prescribed them in cases of hydrophobia. See ANTISPASMODICS, where their use in the last mentioned disorder, as well as

in hooping-cough, will be particularly considered. Cantharides have been given internally in the gout (*Grænwelt* de tuto Cantharidum interno Usu, 1698); but in the last mentioned disorder this mode of treatment is by no means to be commended.

When these acrid stimulants are administered internally, they are prescribed either in powder or in tincture. The dose in substance (which is the most certain form for internal exhibition) is from half a grain to one or two grains every sixth hour, made into pills. Of the tincture the dose is from ten to thirty drops. During the use of either, the patient should be directed to drink of mucilaginous decoctions, emulsions, &c. Camphor is thought by some practitioners to moderate the too stimulating action of cantharides, and is accordingly combined with them or their tincture, whenever they are given internally. Others join nitre with them, as well as camphor. The *Tinctura Cantharidis*, Ph. Lond. is made by digesting for eight days, two drachms of cantharides, and half a drachm of cochineal in a pint and a half of proof spirit. The *Tinctura Meloës Vesicatorii*, Ph. Ed. is made by digesting for seven days, one drachm of cantharides in one pound of diluted alkohol. In the *Tinct. Cantharidum*, Ph. Eblan. the proportions of the Spanish flies and diluted alkohol are the same as in the Ed. pharmacopœia. The dose internally of these tinctures has been mentioned above. They are used topically as a rubefacient, in cases of palsy, (*Thesaur. Med.* 3d. Edition, p. 238) angina, gastritis, &c. The *Emplastrum Cantharidis*, Ph. Lond. et Eblan. (formerly

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called *Emplastrum Vesicatorium*) is compounded of Spanish flies one pound, wax-plaster two pounds, hog's-lard half a pound. The two last ingredients being melted together, the pulverized Spanish flies are mixed with them while yet hot and in a liquid state. The *Emplastrum Meloës Vesicatorii*, Ph. Ed. (formerly called *Empl. Vesicatorium*) consists of equal parts by weight, of mutton suet, yellow wax, rosin, and Spanish flies, the pulverized flies being added to the melted suet, wax and rosin. The *Emplastrum Meloës Vesicatorii compositum*, Ph. Ed. is compounded of Venice turpentine, Burgundy pitch, Spanish flies, each twelve parts, yellow wax four parts, sub-acetite of copper (verdigris) two parts, mustard seed and black pepper, each one part. The pitch and wax are first melted, the turpentine is then added, and to these, while still in fusion, are added the other ingredients reduced to powder. This last mentioned plaster of Spanish flies is too compound, and being of a corrosive quality is rarely prescribed. The other more simple forms of cantharides plaster are in frequent use for exciting vesications in various acute and chronic diseases, particularly in internal inflammations and pains, as well as in many spasmodic affections. Blistering has been recommended by some physicians in the advanced and sinking stage of typhus-fever; but the propriety of such a practice is extremely questionable. We would further remark that in the febrile disorders of children, a good deal of caution is requisite in the application of blisters, a spreading erythematous inflammation, and even gangrene being sometimes the consequence. In some of the abovementioned disorders much benefit is obtained by keeping the

blistered part open, or in an ulcerated state, for a considerable length of time. This is done by means of any of the following ointments, viz. *Unguentum Cantharidis*. Ph. Lond. (formerly called *Unguentum ad Vesicatoria*) prepared by taking pulverized Spanish flies two ounces, distilled water eight ounces, ointment of yellow rosin eight ounces. The Spanish flies being boiled in the water till it is reduced to half the original quantity, the liquor is strained, and the ointment of yellow wax added. The mixture is then placed in a water bath, saturated with sea salt, and evaporated to the consistence of an ointment. With this corresponds the *Ung. Infusi Meloës Vesicatorii*, Ph. Ed. (formerly called *Ung. Epispasticum mitius*) in which are the following ingredients: Spanish flies, white rosin, yellow wax, each one part, Venice turpentine and hog's lard, each two parts, boiling water four parts. The Spanish flies are steeped for the space of a night in the water, and the strained liquor is afterwards boiled with the lard till all the water is evaporated; the wax and rosin are then added, and when they are melted, the turpentine. The *Ung. Pulveris Meloës Vesicatorii*, Ph. Ed. (formerly called *Ung. Epispasticum fortius*) is made by mixing one part of pulverized Spanish flies with seven parts of resinous ointment. For the same purpose is sometimes used the *Unguentum Sabinæ*. (See *Juniperus Sabina*.) *Stenzel de Cantharidibus*, 1740. *Forsten de Cantharidibus*, 1769, (reprinted, 1776.) *Linnæus Meloe Vesicatorius*, *Amœnitat. Acad.* Vol. VI. *Tralles de Usu Vesicantium*, 1776. See also the writings of *Baglivi*, *Hoffman*, *Friend*, *Huxham*, *Pringle*, *De Haen*, &c.

PHOSPHORUS. This inflammable substance has been recommended by some practitioners as a potent stimulus in the advanced and sinking stage of typhus-fever, in palsies, and in various other disorders originating in, or connected with, debility (*Vide Halleri Disputationes*, Vol. VII. and the authors quoted in the *Observations on the Medicinal Virtues of Phosphorus*, inserted in the First Vol. of the *Lond. Med. Rev. and Mag.*) These practitioners have given from the eighth (or only the sixteenth) part of a grain to one or two grains, for a dose. It was found to raise the pulse, to bring on a perspiration, and to remove the low delirium in cases of malignant fever; while in palsies it is said to have produced a glow over the whole body, and to have restored feeling and susceptibility of motion to the muscular fibre. The breath of persons who have taken phosphorus is extremely offensive, and their fæces are luminous in the dark. It has been administered either in a state of solution in æther, or incorporated by trituration with mucilages and oils. (*Hartman de Usu Phosphori Interno Medico.*) It is evident that this inflammable substance, when taken into the stomach, where it must always meet with a sufficient quantity of atmospheric air for its combustion, must act on the internal surface of that viscus, after the manner of an actual cautery; an effect, which if produced in a considerable degree on an organ so essential to life, must ever be considered to be of the most hazardous kind. Accordingly it has been confessed by some practitioners who were bold enough to exhibit phosphorus internally, that inflammation and mortification of the stomach and intestines may be suspected in some

instances, to have been the consequence (*Weichhard* in *Lond. Med. Rev. and Mag.* before quoted). And if it has sometimes been swallowed in doses of one, two, or three grains, without manifest injury, this may be attributed to the very gradual and partial combustion of the phosphorus, in consequence of its being defended from the action of the atmospheric air present in the stomach, by its envelopment in the oils or mucilage with which it was previously mixed, or by the slimy and bilious contents of the stomach itself. Seeing that when given internally it produces the effects of an actual cautery, endangering in a greater or less degree, according to the quantity administered, the organization of parts essential to life, we are of opinion that phosphorus should be expunged from the catalogue of internal medicines. Nevertheless, for the satisfaction of those who may be desirous of further information on this subject, we shall refer, in addition to the authorities before quoted, to *Buchner's Dissertat. de Phosphori Usu Medico*, inserted in the First Vol. of *Sandifort's Thesaurus*.

ACIDUM phosphoricum. Phosphoric acid. This is said to be a useful stimulus in cachectic cases, in caries ossium and in scrophulous affections. Dose of the concentrated phosphoric acid, procured by the action of nitric acid on phosphorus, from two or three to eight or ten drops, diluted with a sufficient quantity of water. It is a sufficiently safe, and manageable remedy, very different in these respects from phosphorus itself. A much greater number of facts, however, than those hitherto produced, will be required to establish its character as

an efficacious remedy in the disorders abovementioned.

(2) *From the Vegetable Kingdom.*

¶ ACORUS *Calamus*. Hexandria Monogynia. Piperitæ. Indigenous. (*Calamus Aromaticus*. *Radix*.) Sweet Flag. The root of this plant has been commended as a stomachic by some old writers on the materia medica, and formerly various preparations from it were kept in the shops; such as a distilled water, a distilled oil, &c. but the root itself, with its preparations, has now justly fallen into disuse. The materia medica affords a great variety of much pleasanter, as well as much more powerful aromatics.

ALLIUM *sativum*. (See Part I. p. 63.) Garlick. The roots or bulbs of this plant are used both internally and externally as a stimulant, from one to three or four of the bulbuli of the roots termed cloves, have been swallowed night and morning in ague-cases, with very great benefit; they have also been given in worm-cases in the same manner, and with the same success. (See ANTHELMINTICS.) Moreover garlick has been administered internally with manifest advantage, in humoral asthma (See EXPECTORANTS) and dropsy. The expressed juice, or an infusion, or a decoction of the roots in milk, are suited to the last mentioned disease, and the form of a syrup to asthma. The *Syrupus Allii* of the Swedish and Dublin pharmacopœias has been already described at p. 149 of this Synopsis. Formerly

there was a similar preparation in the London pharmacopœia.—Externally the bruised roots alone, or mixed with other ingredients, have been applied in the form of a cataplasm to the soles of the feet, the wrists, and other parts of the body, in eruptive fevers (*Sydenham*) in the cold fit of intermittents, (*Lind*) &c. And *Bergius* directs the juice to be applied by means of cotton to the meatus auditorius in cases of rheumatic deafness (*Thesaur. Med.* 3d. Edition, p. 240.)—*Wedel de Allio*.

AMOMUM *repens*. [Amomum Cardamomum.] Monandria Monogynia. Scitamineæ. East Indies, Syria, and Egypt. (Cardamomum minus. Semen.) Lesser Cardamom. The seeds of this plant abound in a fragrant aromatic oil, and consequently prove a grateful and powerful stomachic, in cases of dyspepsia, flatulent colic, &c. In the London pharmacopœia there are two tinctures of cardamom, viz. a simple, and a compound tincture; the first named *Tinctura Cardamomi*, prepared by digesting for eight days, three ounces of the bruised seeds in two-pints of proof spirit. Dose from one to three drachms. The other named *Tinctura Cardamomi composita* (formerly called *Tinctura stomachica*.) prepared by digesting for fourteen days, two drachms of the cardamom seeds, two drachms of carraway seeds, two drachms of cochineal, half an ounce of cinnamon, and four ounces of raisins, in two pints of proof spirit. It would be an improvement in this preparation, if the proportion of cardamom seeds were increased, if the cochineal were omitted, and if, instead of four ounces of raisins, one ounce of pulverized sugar-candy were to be

added, after the digestion is over. Dose, from one drachm to half an ounce or more. It is a weaker aromatic than the simple tincture of cardamom. *Tinctura Amomi Repentis*, Ph. Ed. is prepared by digesting for seven days, four ounces of the bruised seeds in two pounds and a half of diluted alcohol. In the Dublin pharmacopœia the proportions are, cardamom-seeds 3oz. and proof spirit 2lbs. digested together for seven days. Dose, from one to two or three drachms.

AMOMUM *Zingiber*. Class and order the same as in the preceding. East and West Indies. (*Zingiber. Radix.*) Ginger. This is the least acrimonious of all the foreign aromatics. It may be taken in considerable quantities, either with food or medicine, being an excellent stimulant, particularly suited to constitutions subject to flatulency, atonic gout, and other disorders characterized by want of energy in the organs of digestion. In these cases it may be given either by itself, or combined with bitters and other tonics. It is also joined with absorbents. It is a common and useful addition to cathartic medicines, particularly to infusions and tinctures of the vegetable cathartics, serving to moderate their irritating action on the bowels. The pulverized root may be given in doses of ten to thirty grains. It has sometimes been used with advantage as a masticatory in strumous affections of the tonsils (See p. 124.) It is often prescribed in the form of a watery infusion, (ginger tea) which is made by steeping two ounces of the bruised root in one pint of boiling water. A wine glass full of such an infusion, taken warm three or four times a

day, has afforded great relief in many cases of gouty dyspepsia. The officinal preparations are a syrup and tincture. The *Syrupus Zingiberis*, Ph. Lond. is made by steeping four ounces of bruised ginger in three pints of boiling water, for four hours; then straining and adding a sufficient quantity of white sugar. The *Syrupus Amomi Zingiberis*, Ph. Ed. is made by steeping three ounces of bruised ginger in four pounds of boiling water, for twenty-four hours; then adding to the strained liquor seven pounds and a half of white sugar. Dose of either from one to three or four drachms. The *Tinctura Zingiberis*, Ph. Lond. is made by digesting for eight days, two ounces of pulverized ginger, in two pounds of proof spirit. Dose, one or two drachms.

¶ AMYRIS *Elemifera*. Octandria Monogynia. Dumosæ. Arbor. Spanish America. (Elemi Resina.) Elemi. This resinous substance is employed in the preparation of the ointment named after it, in the Lond. and Dublin Ph. and which is used as a stimulant application to foul ulcers. It may be doubted whether for this or any other purpose, it is at all preferable to common rosin.

¶ AMYRIS *Gileadensis*. Class and order as before. Arbor. Arabia. (Balsamum Gileadense. Balsamum e Mecca. Opobalsamum. Resina liquida.) Balsam of Gilead. Agrees in its medicinal properties with the balsam of Canada, which see.

ANETHUM *Foeniculum*. Pentandria Digynia. Umbellatæ. Indigenous. (Foeniculum Dulce. Semen)

Sweet Fennel. The seeds of this plant are a light pleasant aromatic. A distilled water is prepared from them.

¶ *ANETHUM graveolens*. Class and order as above. Cultivated in gardens. (*Anethum*. Semen.) Dill. Lightly aromatic, but less palatable than the preceding. The officinal preparation from it is a distilled water. A superfluous addition to the materia medica list.

¶ *ANGELICA Archangelica*. Class and order the same as of the last. Cultivated in gardens. (*Radix*. *Folium*. *Semen*.) *Angelica*. The root, leaves and seeds of this plant possess an agreeable aroma; but we do not conceive that for any purposes, this plant or any part of it, can be preferable to the sweet fennel, anisum, cardamom, carraway, ginger, or peppermint.

ANTHEMIS Pyrethrum. (*Radix*.) Pellitory of Spain. See *SIALAGOGUES*.

ARISTOLOCHIA Serpentaria. (*Serpentaria Virginiana*. *Radix*.) Virginian Snake-root. To the uses of this aromatic bitter in typhus and intermittent fever, as mentioned under *DIAPHORETICS*, (p. 240) we may add that it is also advantageously prescribed in cases of atonic gout, and the *clavus hystericus* of Sydenham. Concerning the preparations and doses of this drug, see the class above referred to.

ARNICA montana. Syngenesia Polygamia Super-

flua. Compositæ radiatæ. Northern parts of Europe. (Herba. Flos. Radix.) Leopard's-bane. The herb, flowers, and root of this plant are frequently and not unsuccessfully prescribed by the continental physicians, and particularly by the physicians of Vienna, in cases of typhus fever, and intermittent fever; in the advanced and sinking stages of dysentery; in palsy, and in various other states of debility, both with and without febrile affection of the system. They prescribe it in substance, as well as in infusion and decoction, of all which formulæ, examples are given in the *Thesaur. Med.* pp. 213, 221, 228, and 229,) whither the reader is referred for other remarks concerning the use of this vegetable. In many cases it may be advantageously joined with the Peruvian bark. Of the dried flowers, the dose in substance is from five to ten grains. Generally, however, the form of an infusion is to be preferred, made with half a drachm or one drachm of the flowers to a pint of water. As this remedy produces violently irritating effects upon the stomach when administered too freely, it will always be advisable to begin with moderate doses. *Buchner de Effectibus Arnicæ*, 1741. *Schutt de Viribus Arnicæ*, in the 4th Vol. of *Baldinger's Sylloge*.

ARUM maculatum. (See p. 150.) Wakerobin. The fresh root of this plant has been given with success in some cases of chronic rheumatism, either in the form of an electuary (*Thesaur. Med.* p. 220.) or in the officinal form of a conserve; so that in either way ten or fifteen grains of the root be taken thrice a day. An extract prepared from the root

and leaves is recommended by Gesner. Of its use in humoral asthma, mention has been already made under EXPECTORANTS. *Wedelius* de Aro, 1701.

BUBON *Galbanum*. The medical virtues of this gum-resin, galbanum, have been detailed under the class of EMMENAGOGUES, (see pp. 272, 273,) to which the reader is referred for an account of its preparations and doses. It is usefully joined with bitters and opiates in hysterical affections, possessing the efficacy, without the disagreeable smell of asa-fœtida.

¶ **CANELLA** *alba*. Dodecandria Monogynia. Oleaceæ. West India Islands. Arbor. (Cortex.) *Canella alba*. The dose of this aromatic bark is from ten to thirty grains. It is rarely administered alone, and may well be erased from the long list of stimulant drugs.

CAPSICUM *annuum*. Pentandria Monogynia. Solanaceæ. South America, and by cultivation in the West Indies. (*Piper Indicum*. Capsula.) Red Pepper. Cayenne Pepper. The capsula or pod of this plant is one of the most pungent and powerful aromatics. Its use as a condiment is well known. Of late years its stimulant properties have been rendered subservient to medicinal purposes. It has been given with manifest advantage in cases of gouty dyspepsia, in some hydropic affections joined with paralytic symptoms, and in the advanced and sinking stage of typhus, and the malignant endemic fever of the West Indies. (*Simmons's Medical Facts*

and Observations, Vol. VII.) Also, in the malignant sore throat, in which it has had a good effect, both when taken into the stomach, and when used as a gargle. *Bergius* relates that he prescribed the seeds with success in obstinate agues. Of the dried and pulverized capsules, the dose internally, is from one to three grains. In the advanced stage of the yellow fever double the last mentioned quantity has been given at a time. The gargle is prepared by macerating the powder first in warm vinegar, and afterwards adding a proper quantity of hot water, and continuing the maceration for a sufficient length of time. The proportions, two drachms of the capsicum to half a pound of each menstruum. (*Thesaur. Med.* p. 211.)

CARUM *Carui*. Pentandria Digynia. Umbellatæ. Cultivated in gardens. (Caruon. Semen.) Carraway. The seeds of this plant are a warm and efficacious aromatic, well suited to cases of flatulency, dyspepsia, and colic. They are a frequent and useful addition to cathartic medicines, whose irritating action upon the stomach and intestinal canal is thereby diminished. The officinal preparations are, a distilled oil and a spirit. Dose of the oil, from one to three or four drops; of the spirit, from one drachm to half an ounce

CISTUS *Creticus*. Polyandria Monogynia. Ascyroideæ. Syria, Cyprus, and other parts of the Levant. (Ladanum. Resina.) Cretan Cistus. Ladanum. The resinous substance is the basis of the *Emplastrum Ladani compositum*, Ph. Lond. (formerly termed *Emplastrum Stomachicum*,) which

is composed of ladanum three ounces, frankincense one ounce, pulverized cinnamon and expressed oil of nutmeg, called oil of mace, each half an ounce, oil of spearmint one drachm. The ladanum previously softened by the fire, is added to the melted frankincense, and then the oil of mace. These are afterwards beaten together, in a warm mortar, with the cinnamon and spearmint oil, so as to form a plaster, which is applied to the epigastric region, in cases of dispepsia, gouty flatulency, and spasms of the stomach.

CITRUS *Aurantium*. (*Aurantium Hispalense*.) The Seville Orange. The stomachic virtues of the rind of this fruit have been already sufficiently detailed under the class of TONICS.

CLUTIA *Eluteria*. [*Croton Eleutheria*.] Cascarilla. See TONICS.

COCHLEARIA *officinalis*. *Tetradynamia Siliculosa*. *Siliquosæ*. Northern parts of Europe. (*Cochlearia Hortensis*. *Herba*.) Scurvy-grass. The fresh herb is a well known antiscorbutic. It's expressed juice is a principal ingredient in the *Succus Cochleariæ compositus*, Ph. Lond. which consists of the juice of scurvy-grass two pints, the juice of brooklime and water-cresses, each one pint, and the juice of Seville oranges, twenty ounces by measure. The *Succus Cochleariæ compositus*, Ph. Ed. consists of the juice of Scurvy-grass, of water-cresses, and of Seville oranges, each two pounds, spirit of nutmegs half a pound. Dose, three or four ounces twice or thrice a day.

COCHLEARIA Armoracia. Class and order as of the last. Cultivated. (*Raphanus rusticus*. Radix.) Horse-radish. The root of this plant is stomachic and antiscorbutic, in a very considerable degree. Its use as a condiment has been already noticed at p. 100, Part I. of this work. In this place it will be sufficient to mention, that a strong infusion of the horse-radish is a good remedy in many cases of palsy and chronic rheumatism. *Thesaur. Med.* p. 228 and 232, where other observations respecting the medicinal uses of this root are given. The *Spiritus Raphani compositus*, Ph. Lond. is prepared by distilling with proof spirit (and water sufficient to prevent empyreuma) fresh horse-radish root, Seville orange peel, scurvý-grass, and bruised nutmegs. Dose, from two drachms to half an ounce.

COPAIFERA officinalis. Class and order as mentioned at p. 152. (*Balsamum Copaiva*. Resina liquida.) Balsam of Copaiva. West Indies and South America. This resinous juice is frequently given in cases of fluor albus and gleet; but in both these cases, and especially in the former, it proves in many instances too irritating. It has sometimes been prescribed with good effect as a laxative, in hæmorrhoidal affections. (*Thesaur. Med.* p. 235.) Dose, twenty, thirty, or forty drops.

CORIANDRUM sativum. Pentandria Digynia. Umbellatæ. Southern parts of Europe. (Semen.) Coriander. The seeds of this plant coincide in their medicinal properties with the seeds of the carraway. They are employed to dispel flatulency, and

are frequently added to infusions and tinctures of cathartic drugs, to lessen their irritating effects on the stomach and intestines.

¶ CUMINUM *Cuminum*. Pentandria Digynia. Umbellatæ. Egypt, and, by cultivation, in Sicily and Malta. (Semen.) Cummin. The seeds of this plant agree in their aromatic properties with those of the anethum. For all medicinal purposes they are less eligible than the seeds of cardamom, carraway, or coriander, and may therefore well be dispensed with. The officinal preparations into which these seeds enter, are the *Cataplasma Cumini*, Ph. Lond. and the *Emplastrum Cumini*, Ph. Lond. The first of these preparations consists of cummin-seeds, bay berries, scordium, Virginian snake-root, and cloves, made into a cataplasm with honey. The other is composed of cummin-seeds, carraway-seeds, bay-berries, Burgundy pitch, and yellow wax. The pitch and wax being melted, the other ingredients are mixed with them, so as to form a plaster. Both the cataplasm and plaster are applied to the epigastric region, and to other parts of the abdomen, in disorders of the stomach and other viscera.

DAPHNE *Mezereum*. (See p. 124.) Mezereon. The rind or cortical part of this acrid plant is frequently prescribed in the form of a decoction, in venereal, rheumatic, glandular, and cutaneous affections. It is an ingredient in the *Decoctum Sarsaparillæ compositum*, Ph. Lond. (for which see p. 224) and is the basis of the *Decoctum Daphnes Mezerei*, Ph. Ed. which is made by boiling two drachms

of the bark of this root, and half an ounce of liquorice root, in three pounds of water, down to two pounds. Dose, from a quarter to half a pint, three or four times a day, in the cases above mentioned. The fresh root, bruised, is used externally as a rubefacient. *Russell* in the 3d Vol. of the *Med. Trans.*

DORSTENIA *Contrajerva*. (See p. 242.) *Contrayerva*. The use of this drug in malignant forms of typhus, and in the advanced stage of dysentery, &c. has been already noticed at the place above referred to; where also the preparation and doses of the *Pulvis Contrayervæ compositus*, Ph. Lond. are mentioned. Its decoction is sometimes used as a gargle (with the addition of vinegar, honey, and tincture of myrrh) in the gangrenous sore throat. (*Thesaur. Med.* p. 147.)

¶ **ERYNGIUM** *maritimum*. Pentandria Monogynia. Umbellatæ. Indigenous. (Radix.) *Eryngo*. The medicinal powers of this vegetable are so very inconsiderable, that it is surprising that it should hold a place in any of the modern pharmacopœias.

EUCALYPTUS *piperita*. (*Eucalyptus obliqua*?) Icosandria Monogynia. New Holland. The leaves of this tree abound in a pungent volatile oil, in smell and taste not very dissimilar to the oil of peppermint. Although not quite so pleasant (having somewhat of a camphorated taste with it) as the oil last mentioned, yet it would probably answer in cases of dyspepsia, flatulency, colic, &c. as well as the peppermint; and in some disorders where a

more pungent stimulant is required, better. See *White's Voyage to New South Wales*.

EUGENIA caryophyllata. Icosandria Monogynia. Hesperidææ. East Indies. (*Caryophyllus aromaticus*. *Caryophyllus aromaticus*. *Pericarpium immaturum*, et *Oleum ejus essentielle*, Ph. Lond. *Floris germen*, Ph. Ed. Arbor.) Clove. The spice, termed clove, is the dried unripe flower bud and seed vessel of the tree above mentioned. It is among the warmest and most powerful aromatics. It is an ingredient of the *Confectio aromatica*, Ph. Lond. *Electuarium Scammonii*, Ph. Lond. &c. Dose, from five to ten grains. *Thunberg de Caryophyllis aromaticis*, 1788.

FERULA assafoetida. (See pp. 152, 274.) *Asafoetida*. Concerning the use of this diffusively and powerfully stimulating gum-resin, in certain morbid affections of the pulmonary organs, mention has been made in the place above referred to. It is not less serviceable in some cases of flatulency, and in amenorrhœa depending upon diminished action of the uterine vessels. It is frequently prescribed in hysteria; but against this disorder, opium and the volatile alkali are more to be relied on. It is administered clysterwise in worm cases. The doses and officinal preparations of this drug have been already mentioned at the pages above referred to.

GUAIACUM officinale. (See p. 243.) *Guaiacum*. The medicinal powers of the wood and resin of this tree, with the preparations and doses of both, have

been already mentioned in the page above referred to, under the class of DIAPHORETICS.

¶ *INULA Helenium.* (See p. 387.) Elecampane. The root of this plant is lightly aromatic and bitter. There are so many vegetables that possess both these qualities in a superior degree, that it may justly be deemed a superfluous article in the list of the materia medica. Dose of the pulverized root, from half a drachm to one drachm.

¶ *JUNIPERUS communis.* (See p. 220.) Juniper. The berries and tops of this shrub abound in a fragrant aromatic oil, the medicinal uses of which, together with the various preparations and doses, have been mentioned at the page above referred to, under the class of DIURETICS.

JUNIPERUS Lycia. Class and order as of the last. Arabia. (Olibanum. Gummi-resina.) Olibanum. Supposed to be the frankincense of the ancients. This gum-resinous substance may be used for the same purposes as mastich, ladanum, or common frankincense (thus) which see.

JUNIPERUS Sabina. Class and order as above. (See p. 275.) Savin. Internally this plant is rarely employed, otherwise than for the purpose of promoting the menstrual evacuation. (See EMMENAGOGUES at the place above referred to.) An ointment prepared from the bruised leaves is used to excite a purulent discharge from blisters and issues. This ointment is composed of fresh juniper-leaves bruised three ounces, yellow wax three ounces,

hog's lard one pound. The leaves are added to the melted wax and lard, and the whole is afterwards strained. The Extract, Tincture, and other preparations of this plant, have been noticed under the section above mentioned.

KÆMPFERIA rotunda. Monandr. Monogynia. Scitamineæ. East Indies. (Zedoaria. Radix.) Zedoary. The root of this plant possesses considerable stomatic virtues, and has accordingly been prescribed with good effect in cases of dyspepsia, flatulent colic, chronic diarrhœa, hysteria, and febrile debility. Dose of the pulverized root, from 15 grains to 2 scruples.

LAURUS Camphora. (See p. 244.) Camphor. The medicinal powers of this drug have been already detailed, together with its preparations and doses, at the place above referred to, under the class of DIAPHORETICS.

LAURUS Cinnamomum. Class and order as above. Arbor. Ceylon. (Cinnamomum. Cortex, et ejus Oleum essentielle.) Cinnamon. This is the most agreeable of all aromatics, and is at the same time sufficiently powerful for all cases where a warm and penetrating stimulant is required. Hence its general use in debilities of the stomach and alimentary canal, in atonic gout, &c. It is added to bitter and other tonic medicines, to promote their efficacy; and to cathartic drugs, to render them less disagreeable to the stomach, and less griping in their operation. Of the pulverized bark, the dose is from five to fifteen grains. The preparations of this aromatic in the Lond. Edinb. and Dublin phar-

macopœias, are the following: *Aqua Cinnamomi*, Ph. Lond. et Eblan. (formerly *Aqua Cinnamomi simplex*) and *Aqua Lauri Cinnamomi*, Ph. Ed. made by distilling one pound of the bruised cinnamon in as much water as may suffice to prevent empyreuma. In the London and Dublin formula, it is directed to macerate the cinnamon for twenty-four hours previous to the distillation. A gallon of water is distilled from the above mentioned quantity of this aromatic bark. Dose, from one to two ounces. *Spiritus Cinnamomi*, Ph. Lond. (formerly *Aqua Cinnamomi Spirituosa*) is made by distilling one pound of bruised cinnamon, in a gallon of proof spirit of wine, with water sufficient to prevent empyreuma. A gallon is distilled off. In the Dublin pharmacopœia, 9 lbs. of proof spirit are directed to the same quantity of cinnamon, and 9 lbs. are distilled off. The *Sp. Lauri Cinnamomi*, Ph. Ed. is made by distilling half a pound of bruised cinnamon in nine pounds of diluted alcohol, with water sufficient to prevent empyreuma, the cinnamon being previously macerated with the alcohol for the space of two days. Nine pounds of spirit are distilled off. Dose of these elegant aromatic spirits, from one to three drachms. The *Tinctura Cinnamomi*, Ph. Lond. is made by digesting for ten days, one ounce and a half of bruised cinnamon in one pint of proof spirit of wine. In the Dublin formula, the proportions are the same. The *Tinctura Lauri Cinnamomi*, Ph. Ed. is made by digesting for seven days, three ounces of bruised cinnamon in two pounds and a half of diluted alcohol. Dose of either, from half a drachm to two drachms. The *Tinctura Cinnamomi composita*, Ph. Lond. (formerly *Tinctura*

aromatica) is made by digesting for eight days, bruised cinnamon six drachms, lesser cardamoms three drachms, long pepper and ginger in powder, each two drachms, in two pints of proof spirit of wine. The *Tinctura Cinnamomi composita*, Ph. Ed. consists of bruised cinnamon, lesser cardamom seeds bruised, each one ounce, long pepper pulverized two drachms, diluted alcohol two pounds and a half, digested together for seven days. The *Tinctura Aromatica*, Ph. Eblan. is the same with the last mentioned preparation, except that a triple quantity of cardamom seeds is used, and that there are 2 lbs. of proof spirit instead of two pints. All these tinctures are very hot stimulant preparations, and accordingly are prescribed in small quantities, (viz. from half a drachm to one drachm) added to other cordial and tonic medicines, in dyspeptic affections, gouty languor, flatulency, &c. In addition to the above mentioned preparations, cinnamon is an ingredient in the *Tinct. Cardamomi comp.* Ph. Lond. in the *Sp. Lavendulæ comp.* Ph. Lond. et Ed. in the *Confectio Aromatica*, Ph. Lond. in the *Pulvis Aromaticus*, Ph. Lond. et Ed. in the *Pulvis Cretæ comp.* Ph. Lond. in the *Pulvis Carbonatis Calcis comp.* Ph. Ed. and in the *Trochisci Cretæ*, Ph. Lond. *Wedel* de Cinnamomo, 1707. *Gmelin* de Analepticis quibusdam nobilioribus e Cinnamomo, 1763. *Thinberg* on Cinnamon, in the Swedish Transactions for 1780.

LAURUS Cassia. Class and order as above. Arbor. East Indies. (Cassia lignea. Cortex. Flos nondum explicitus.) The cassia bark and flower buds, gathered before they expand, and dried,

coincide in medicinal virtues with the true cinnamon, for which it is a common substitute.

LAURUS nobilis. Class and order as before. Southern parts of Europe. (*Laurus. Folium. Bacca ejusque Oleum.*) The bay-tree. The leaves and berries abound in an aromatic oil. A decoction of the leaves is sometimes used externally as a discutient. They enter into the *Decoctum pro Fomento*, Ph. Lond. The berries enter into the composition of the *Emplastrum Cumini*, Ph. Lond. and *Cataplasma Cumini*, Ph. Lond. The expressed oil of the berries (*Oleum Laurinum*) has a place in most of the foreign dispensatories, and is applied externally as a liniment in rheumatic and other local affections. For these purposes, however, we would prefer combinations of camphor with olive-oil or with soap, or solutions of camphor in alcohol; of all which there are formulæ in the London, Edinburgh and Dublin pharmacopœias.

LAURUS Sassafras. (See p. 248.) *Sassafras.* The medical uses of the wood, root, bark, and essential oil of this tree, have been already noticed at the place above referred to, under the class of *DIAPHORETICS*.

LAVANDULA Spica. *Didynamia Gymnospernia. Verticillatæ.* Southern parts of Europe. (*Lavendula. Flos. Spica florens.*) Lavender. The flowers and flowering spikes are lightly aromatic, and possess an agreeable odour; to which last this vegetable is chiefly indebted for the place it still

retains in the list of the materia medica. The *Sp. Lavendulæ*, Ph. Lond. is made by distilling in a water bath one pound and a half of lavender flowers, with one gallon of proof spirit of wine. Five pints are distilled off. It is added to juleps, mixtures, and draughts, to give them a colour and agreeable flavor; and is used for making the *Sp. Lavendulæ compositus*, Ph. Lond. into which enter spirit of lavender three pints, spirit of rosemary one ounce, red saunders one ounce. These are digested together for ten days and strained. The *Sp. Lavendulæ Spicæ compositus*, Ph. Ed. consists of the same ingredients, (but in different proportions) with the addition of cloves; and is the most aromatic of the two. The *Tinctura Lavendulæ composita*, Ph. Eblan. is similar to the last mentioned preparation of the Edinburgh dispensatory. Dose of any of these preparations, from twenty drops to a couple of drachms. The *Essential Oil*, commonly called oil of spike, is sometimes added to stimulating liniments, which it serves to perfume, at the same time that it communicates some degree of activity according to the proportion in which it is added.

¶ MARANTA *Galanga*. Monandria Monogynia. Scitamineæ. China and the Philippine Isles. (*Galanga*. Radix.) The root of this vegetable possesses a considerable degree of aromatic pungency, and has sometimes proved serviceable in languor and debility of the stomach, flatulent colic, and paralytic affections of the tongue and œsophagus. But for these, or any other medicinal purposes, it does

not appear to be preferable to zedoary; and some other bitterish-aromatic drugs belonging to this class. Dose, from ten grains to one scruple.

¶ *MELALEUCA Leucadendron*. Polyadelphia Polyandria. Hesperideæ. Arbor. Molucca Isles. (Cajeputa. Oleum Volatile.) The oil distilled from the leaves of this tree, and known by the name of Cajeput oil; has of late years been recommended in cases of epilepsy and hysteria, internally; and in rheumatic affections, externally. Dose, from one to five or six drops. As an internal medicine, it is doubtful whether it be preferable to the oleum rosmarini and other essential oils; and as an external remedy, the oleum terebinthinæ, or a combination of camphor with olive oil and oleum lavendulæ, will be found to answer equally well. *Thunberg* on Cajeput Oil, in the Swedish Transactions for 1781.

MELISSA officinalis. Didynamia Gymnospermia. Verticillatæ. Southern parts of Europe in Alpine situations. Cultivated abundantly in most parts of Europe. (Herba.) Balm. Lightly aromatic. The infusion of the leaves is a common beverage in febrile affections; to which, however, pure water or toast and water is generally better suited.

MENTHA piperita. Didynamia Gymnospermia. Verticillatæ. Indigenous (*Mentha piperitis*. Herba.) Peppermint. An infusion of the leaves, or the water distilled from them (*Aqua Menthæ piperididis*, Ph. Lond. et Eblan. *Aqua Menthæ piperitæ*, Ph. Ed.) afford immediate relief in vomitings from too

great irritability of the stomach, and in flatulency, &c. The dose of the distilled water is from half an ounce to one ounce, or an ounce and a half. The *Spiritus Menthæ piperitidis*, Ph. Lond. is made by distilling one pound and a half of dried peppermint with a gallon of proof spirit, and water sufficient to prevent empyreuma. A gallon is distilled off. In the Ed. formula qlbs. of diluted alcohol are used, and qlbs. are distilled off. Dose, from half a drachm to one drachm. The *Oleum Essentiale Menthæ piperitidis*, Ph. Lond. et Eblan. *Oleum Volatile Menthæ piperitæ*, Ph. Ed. is a common and useful addition to cathartic bolusses and pills, to prevent griping. Dose, from one to three or four drops.

MENTHA viridis. Class and order as above. Indigenous. (*Mentha sativa*. Herba.) Spearmint. Of similar medicinal virtues, but in a much weaker degree with the preceding species. The preparations from it are the same; namely, a distilled water, spirit and oil. The spearmint water (*Aqua Menthæ sativæ*, Ph. Lond. et Eblan.) is a common vehicle for other medicines, and may be given in doses of two ounces or more. The spirit and oil (*Spiritus Menthæ sativæ*, Ph. Lond. and *Oleum essentiale Menthæ sativæ*, Ph. Lond. et Eblan.) are given in the same doses as the spirit and oil of the first mentioned species.

¶ *MENTHA Pulegium*. Class and order as of the last. Indigenous. (*Pulegium*, Herba. Flos.) Pennyroyal. Nearly equal to peppermint in aromatic pungency. The officinal preparations of this

plant are the same with those of the two preceding species, and may be given in the same doses. An unnecessary article in the list of the *materia medica*.

MYRISTICA moschata. Monœcia Monandria. Oleaceæ. Arbor. Molucca Isles. (*Myristica*. Fructus nucleus, *nux moschata* dictus. Oleum essentiale et Oleum expressum, *Oleum macis* vulgo dictum. Macis.) The nutmeg tree. The kernel of the fruit of this tree, known by the name of nutmeg, is a pleasant but strong aromatic, which is frequently added to other stomachic drugs in languor and debility of the digestive organs, in vomiting and diarrhœa; and in the advanced stage of dysentery. Like camphor it has a narcotic effect, when administered too freely; hence *Dr. Cullen* has cautioned against its use in subjects disposed to apoplexy or palsy. Dose, from five to fifteen grains. The *Spiritus Nuclei fructus Myristicæ*, Ph. Lond. (formerly *Aqua Nucis Moschatæ*) is made by distilling two ounces of bruised nutmegs in one gallon of proof spirit of wine, with water sufficient to prevent empyreuma. One gallon is distilled off. In the preparation of the *Spiritus Myristicæ Moschatæ*, Ph. Ed. and *Sp. Nucis Moschatæ*, Ph. Eblan. 9lbs. of diluted alcohol or proof spirit are used, and 9lbs. are distilled off. Dose, from half a drachm to two drachms. The nutmeg is an ingredient in the *Sp. Raphani comp.* Ph. Lond. in the *Sp. Lavend. comp.* Ph. Lond. et Ed. in the *Confectio aromatica*, Ph. Lond. in the *Electuarium Mimosæ Catechu*, Ph. Ed. and in the *Pulvis Carbonatis Calcis compositus*, Ph. Ed. and *Trochisci Carbonatis Calcis*, Ph. Ed. The

expressed oil of nutmegs, termed *Oleum Macis*, is used externally in stimulating liniments and plasters. It is one of the ingredients of the *Emplastrum Ladani compositum*, Ph. Lond. The membranaceous involucre of the kernel, termed Mace (*Macis*,) possesses all the aromatic virtues of the kernel itself (nutmeg) but in a higher degree. Accordingly it is given in smaller doses. *Thunberg de Myristica moschata*, 1789.

MYROXYLON *Peruiferum*. Decandria Monogynia. Lomentaceæ. Arbor. South America. (Balsamum Peruvianum.) Balsam of Peru. Coincides in medicinal virtues with the Balsam of Copaiva, (see p. 152.) except that it is more heating, and not laxative in the usual doses, as the copaiva is. Formerly much used by the surgeons as an ingredient in digestive ointments. The *Tinctura Balsami Peruviani*, Ph. Lond. is made by digesting, until the solution is completed, four ounces of Peruvian balsam, with one pint of rectified spirit of wine. Sometimes prescribed as an external application to stimulate and deterge foul and obstinate ulcers. The medicinal virtues of this and other balsams were greatly over-rated by *Hoffman*.

MYRTUS *Pimenta*. Icosandria Monogynia. Hesperideæ. Arbor. Jamacia. (Pimento. Piper Jamaicense.) Pimento. Jamaica Pepper. Allspice. This is a very pungent aromatic, and is prescribed in the same manner as cinnamon and nutmeg are, and in the same doses. The *Aqua Pimento*, Ph. Lond. (formerly *Aqua Piperis Jamaicensis*)

is made by distilling half a pound of bruised pimento with water sufficient to prevent empyreuma; the pimento being previously macerated in the water for twenty-four hours. A gallon is distilled off. Similar to this is the *Aqua Fructus Myrti Pimentæ*, Ph. Ed. Dose of either from one to two ounces. The *Spiritus Pimento*, Ph. Lond. is made by distilling two ounces of bruised pimento-berries with one gallon of proof spirit of wine, and water sufficient to prevent empyreuma. One gallon is distilled off. Dose, from one drachm to half an ounce. The *Sp. Fructus Myrti Pimentæ*, Ph. Ed. is made by distilling half a pound of bruised pimento with nine pounds of diluted alkohol, and water enough to prevent burning; the pimento being previously macerated with the alkohol, in a close vessel for the space of two days. Nine pounds are distilled off. This is somewhat stronger than the London preparation. In the Dublin preparation the proportions are the same. Dose, from half a drachm to two drachms. In the Edinburgh pharmacopœia there is an essential oil of pimento (*Oleum Volatile Myrti Pimentæ*) of which the dose is one or two drops.

ORIGANUM vulgare. Didynamia Gymnospermia. Verticillatæ. Indigenous. (Herba.) Wild Marjoram. This plant abounds in a hot pungent essential oil (*Oleum essentielle origani*, Ph. Lond.) coinciding in medical virtues with the ol. roris-marini, ol. lauri, and other aromatic oils. Like the last mentioned oils, it is chiefly used externally as an ingredient in stimulating liniments and embrocations.

¶ *ORGANUM Majorana*. Class and order as of the preceding. Southern parts of Europe. (*Majorana*. *Herba*.) Sweet Marjoram. Coincides in medicinal virtues with the *organum vulgare*; but by cultivation, its aromatic qualities are impaired. It cannot be necessary to retain both species in the list of the *materia medica*.

PANAX Quinquefolium. (See p. 389.) Ginseng. For observations on the medicinal uses of this drug, see the page above referred to, under the class of *TONICS*.

¶ *PASTINACA Opopanax*. (See p. 277.) *Opopanax*. For observations on the medicinal uses of this gum-resin the reader is referred to the class of *EMMENAGOGUES*.

PIMPINELLA Anisum. *Pentandria Digynia*. *Umbellatæ*. Syria and Egypt. (*Anisum*. *Semen*.) Aniseeds are an agreeable aromatic, used in the same cases and in the same doses as carraway seeds, which see. The officinal preparations are an essential oil and a compound spirit. (*Spiritus Anisi compositus*, Ph. Lond.) This last is made by distilling bruised aniseeds and bruised angelica seeds, each half a pound, with proof spirit of wine one gallon, and water sufficient to prevent empyreuma. One gallon is distilled off. Dose, one or two drachms.

PINUS Abies. *Monœcia Polyandria*. (*Monœcia Adelpheia*.) *Coniferæ*. Europe and North America. Arbor. Spruce Fir. From this tree are

obtained the *Pix burgundica*, (Burgundy pitch) and *Thus*, (common frankincense.) The former is the basis of the *Emplastrum Picis Burgundicæ comp.* Ph. Lond. et Eblan. This plaster is applied over the part affected in obstinate rheumatic affections, and between the shoulders, in coughs of long standing, in asthmas, and in cases of incipient phthisis pulmonalis. Frankincense (*Thus*) is an ingredient in various stimulant plasters.

PINUS Balsamea. Class and order as above. Arbor. Canada. (Balsamum Canadense.) Balsam of Canada. Agrees in medicinal properties with common turpentine, which see.

PINUS Larix. (See pp. 196—221.) The Larch. The medicinal uses of turpentine (*terebinthina*) oil of turpentine, *resina flava*, and other preparations from this tree have been already noticed at the pages above referred to. It belongs, however, to this place to mention that the *oleum terebinthinæ* has been recommended by some practitioners as a remedy against the sciatica or hip-gout. Dose fifteen or twenty drops, mixed up with honey (*The-saur. Med.* p. 222.)

PINUS sylvestris. (See p. 222.) The Scotch Fir. An account of the medicinal operation of tar (*Pix liquida. Resina empyreumatica*) will be found at the place above referred to. The *Unguentum Picis*, Ph. Lond. et Eblan. is composed of equal parts tar and mutton suet. In the *Unguentum Picis*, Ph. Ed. the proportions are five parts of tar to two parts of

yellow wax. These ointments are a common application in cases of *tinea capitis*.

¶ *PIPER Cubeba*. *Diandria Trigynia*. *Piperitæ*. Java. (*Cubeba*.) *Cubebs*. Applicable to the same purposes as the following species of pepper, which surpass the *cubeba* in aromatic potency, and consequently render it a superfluous article in the list of the *materia medica*.

PIPER longum. Class and order as above. East Indies. (*Fructus*.) Long pepper. This is one of the hottest and most stimulating aromatics, being only surpassed in pungency by the *capsicum*. As such it is given in cases of gouty dyspepsia, and other atonic conditions of the stomach, joined with bitters, absorbents, opiates, and other medicines. It is sometimes prescribed in paralytic affections, and is occasionally added to the *cinchona* in obstinate agues. Dose, from five to ten grains. It is a principal ingredient in the *Pulvis Aromaticus*, Ph. Lond. et Eblan. (formerly *Species Aromaticæ*) which consists of cinnamon two parts, lesser cardamom, ginger, and long pepper, each one part. Dose, from five to fifteen grains. Long pepper also enters into the composition of the *Pulvis Cretæ compositus*, Ph. (See p. 213.) Of the *Confectio Opiata*, Ph. Lond. and of the *Tinctura Cinnamomi composita*, Ph. Lond. et Ed. (formerly called *Tinctura Aromatica*) for which see p. 438.

PIPER nigrum. Class and order as before. East Indies. (*Bacca vel Fructus*.) Black and white Pep-

per. May be given in the same cases and in the same doses with the last mentioned species. Respecting the uses of pepper as a condiment, as well as for some remarks on the effects of these highly stimulating aromatics on different constitutions, see Part I. p. 101.

PISTACIA Lentiscus. (See p. 225.) Mastich. This resin is seldom used for any other purpose than as a masticatory, to stimulate the tongue and fauces in paralytic affections of those parts. But in these cases, ginger or pellitory of Spain will generally answer better. Hence we are disposed to consider mastich as a superfluous article of the materia medica.

PISTACIA Terebinthus. (see p. 223) Class and order as of the last. Arbor. Asia, Africa, Isle of Chios, &c. (Terebinthina Chia.) Chio Turpentine. The liquid resin of this tree, called chian turpentine, coincides in chemical and medicinal properties with common turpentine, already noticed at the page above referred to.

PTEROCARPUS Draco. Sanguis Draconis. (See p. 351.) Dragon's blood. The medical uses of this resinous substance have been already mentioned at the place above referred to.

RHODODENDRON Crysanthum. (See p. 249.) Rhododendrum. Decoctions of the leaves and twigs of this shrub have been given with good effect in gouty affections, and in cases of chronic rheumatism. The

doses have been already specified under the class of DIAPHORETICS.

RHUS Toxicodendron. Pentandria Trigynia. *Dumosæ*. Frutex. North America. (Folia.) Poison Oak. The dried leaves of this shrub, in doses of half a grain or one grain three times a day, have produced considerable benefit in some cases of palsy. *Alderson's Essay*, 1794.

ROSMARINUS officinalis. (See pp. 121—277.) Rosemary. Infusions of this herb joined with valerian, arnica, &c. are sometimes prescribed in cases of palsy. Other medical uses of rosemary have been mentioned at the pages above referred to. The officinal preparations of this aromatic herb, are the *Oleum essentielle Rosismarini*, Ph. Ed. *Oleum Volatile Rosismarini*, Ph. Ed. and the *Spiritus Rosismarinis* Ph. Lond. et Ed. all obtained by distillation in the usual manner. The doses of the oil and spirit are the same as the doses of other essential oils and aromatic spirits. The principal use of both the one and the other is in liniments, embrocations, and other external applications against fixed local pains and paralytic affections.

SAGAPENUM. (Gummi-resina.) Sagapenum. See EMMENAGOGUES.

SALVIA officinalis. (See p. 356.) Sage.

SINAPIS nigra et alba. Tetradynamia Siliquosa. Siliquosæ. Indigenous. Common Mus-

tard and White Mustard. Infusions of the bruised seeds alone, or joined with other stimulating vegetables, (Thesaur. Med. p. 228,) have often proved serviceable in cases of palsy; in which disorder, also, an embrocation made by infusing the farina of the seeds in vinegar, has been employed with advantage. The *Cataplasma Sinapeos*, Ph. Lond. is composed of equal parts pulverized mustard seed and crumb of bread, moistened with a sufficient quantity of vinegar. This preparation, usually called a sinapism, is applied to the soles of the feet in the sinking stage of fevers and other diseases. *Oleum Sinapeos*, Ph. Lond. obtained by expression from the seeds, is a preparation that may well be dispensed with. For other medicinal uses of the seeds of this plant, see Part I. p. 100, and Part II. p. 224, under the class of DIURETICS.

STYRAX *Benzoe*. (See p. 161.) Benzoin. The medical uses and officinal preparations of benzoin have been already noticed at the place above referred to.

¶ STYRAX *officinalis*. (Ibid. p. 162.) Storax. A superfluous article in the list of the materia medica.

TOLUIFERA *Balsamum*. (Ibid. p. 162.) Balsam of Tolu. May be used in the same cases and in the same doses as the balsam of Peru, which see. The other officinal preparation of balsam of Tolu, besides those specified at the place above referred to, is the *Tinctura Balsami Tolutani*, Ph. Lond. made

by digesting, until the solution is completed, one ounce and a half of balsam of Tolu in one pint of rectified spirit of wine. The *Tinctura Toluiferæ Balsami*, Ph. Ed. is made by digesting, until the solution is completed, one ounce and a half of balsam of Tolu in one pound of alcohol. Dose, of either tincture, as an internal medicine, from half a drachm to one drachm. Applied externally to old ulcers, carious bones, &c. The balsam of Tolu also enters into the composition of the *Tinctura Benzoës composita*, Ph. Lond. et Ed.

URTICA dioica. Monæcia Tetrandria. Scabridæ. Indigenous. (Herba.) The Stinging Nettle. In some paralytic cases the use of muscular action has been restored by means of urtication, or stinging with nettles.

VALERIANA officinalis. Wild Valerian. See ANTISPASMODICS.

WINTERANA aromatica. Polyandria Polygynia. Oleraceæ. Arbor. South America. (Winteranus Cortex.) Winter's bark. This is suited to the same cases as the cascarilla, canella alba, zedoary, and other stomachic vegetable substances already described. Dose, from ten grains to one scruple.

PETROLEUM. *Bitumen Petroleum*. (Petroleum Barbadosense.) Rock Oil. Barbadoes Tar. Chiefly used externally in paralytic and rheumatic cases. For the *Oleum Petrolei*, Ph. Lond. See ANTISPASMODICS.

Æther vitriolicus, Ph. Lond: et Eblan. *Æther sulphuricus*, Ph. Ed. Vitriolic *Æther*. Sulphuric *Æther*. There is some difference in the processes for obtaining æther, as directed by the London, Edinburgh and Dublin colleges, which it will be proper to specify. The *Æther vitriolicus*, Ph. Lond. is made by distilling spirit of vitriolic æther, (which preparation has been mentioned at p. 269.) two pounds, with water of pure kali, one ounce. They are previously shaken together, after which fourteen ounces, by measure, of æther are distilled off with a gentle heat. In the Dublin formula, sixteen ounces of vitriolic ethereal liquor are mixed with two drachms of caustic vegetable alkali in powder, and ten ounces are distilled with a gentle heat from a very high retort into a cooled receiver. The *Æther Sulphuricus*, Ph. Ed. is made first by distilling together in a sand bath, of a proper degree of heat, sulphuric acid (vitriolic acid) and alcohol, (rectified spirit of wine) each thirty-two ounces, the distillation being continued until sixteen ounces of liquor have passed into the receiver, kept cool by water or snow. To the product thus obtained are added two drachms of potass (pure kali;) and it is again distilled in a very tall retort, with a very gentle heat, until ten ounces of liquid have passed into the receiver, kept cool during the whole of the process. The product thus obtained is the sulphuric æther. This remarkable chemical product, æther, is given with advantage in various diseases, both acute and chronic, where a powerfully diffusible stimulus is required; such as asthma, hysteria, hemicrania, typhus-fever, &c. In these cases it is combined with distilled aromatic waters, with spirit of ammonia,

with bitters, with the Peruvian bark, and with opiates. Dose, from thirty drops to one drachm. *Spiritus Ætheris Vitriolici compositus*, Ph. Lond. *Æther Sulphuricus cum Alkohole*, Ph. Ed. See ANTISPASMODICS.

CEREVISIA. *Malt Liquor*. The different species of malt liquor have been already enumerated at p. 112, Part I. Of these the *cerevisia nigra Londinensis* (London Porter) is often resorted to with advantage in cases of typhus-fever, where its use is not forbidden by the occurrence of diarrhœa.

VINUM. *Wine*. Respecting the use of wine and of vinous liquors, such as cyder and perry, in low and malignant fevers, in the ulcerated angina, in gangrene, &c. see p. 337, under the class of ANTISEPTICS. There is a propensity in modern practitioners to prescribe wine too soon and too copiously in the treatment of typhus. In such cases its administration should be regulated by the circumstances pointed out in the *Thesaur. Medicaminum*, p. 231. During its use, it is important that the alvine excretion be duly attended to.

SPIRITUS VINI. *Alkohol*. (See p. 114.) Spirit of Wine. *Alkohol*. Spirit of Wine diluted with water, proves a powerful cordial, to which it is sometimes useful to resort, in cases of gouty dyspepsia and chronic diarrhœa; in the advanced and sinking stage of typhus-fever, &c. See p. 337. Spirit of Wine is used externally in stimulating and

antiseptic fomentations, embrocations, collyriums, and gargles. See ANTISEPTICS.

(3) *From the Mineral Kingdom.*

FERRUM, *ejusque præparata*. Iron and its preparations. See TONICS and EMMENAGOGUES.

AQUA calida. Hot water, taken in small quantities, and in as high a temperature as the mouth will well bear, during or after meals, is an excellent stimulus to the stomach in cases of cephalalgia, gouty languor, and dyspepsy; to the hepatic system in cases of jaundice and obstructed biliary secretion; and to the uterine system in cases of chlorosis, and amenorrhœa, when owing to diminished arterial action. See *Saunders* on the Aqueous Regimen in his Treatise on Mineral Waters.

THERMÆ *Bathonicæ*. The Bath Waters. The stimulant powers of these mineral waters, so eminently serviceable in a variety of diseases connected with torpor and debility, may be referred to their chalybeate impregnation and high degree of temperature, jointly. Hence their use in gouty dyspepsia, jaundice, chlorosis, amenorrhœa, palsy, lead-colic, &c. See *Falconer* on the Medicinal Effects of the Bath Waters, 1798, and *Gibbes's* Second Treatise on the Bath Waters, 1803.

BALNEUM calidum. The Hot Bath. Immersion

of the body in water heated to the temperature of 98 or 100 of Fahrenheit, has a powerfully stimulant effect upon the circulating and nervous system. Hence its use in various disordered conditions of the human constitution connected with languid and debilitated action of the stomach, bowels, and skin. Hence too, its use in gouty and rheumatic stiffnesses and immobility of the joints; in ischiadic affections, as well as white swellings of the knee; and in various species of palsy. The hot salt water bath, and the Bath water bath, are more stimulating than a fresh water bath of the same temperature, and consequently more efficacious in some of the disorders above-mentioned. The degree of stimulus communicated by the hot bath is proportionate to the degree of temperature and the length of time during which the body remains immersed in it. These must be varied according to the nature of the disorder for which this remedy is employed; for the regulation of which the treatises hereafter quoted should be consulted. We shall only remark, that in general, the higher degrees of temperature are best suited to paralytic cases. See the Treatises of *Falconer*, *Saunders*, and *Gibbes*, already quoted. Also, *Marcard* on the Nature and Use of Baths, (in the German tongue) 1793.

BALNEUM Vaporis. The Vapor Bath. Applicable to the same cases as the common hot water bath; but deemed by some practitioners to be more efficacious in nodosities of the joints and paralytic affections. *Denman* on the Construction and Method of Using Vapour-Baths, 1769. *Dap-*

pet Maniere d'administrer les Bains de Vapeur, 1790.

GAS oxygenium. (See TONICS, p. 407.) Oxygen gas. The inhalation of this gas has been found beneficial in some cases of palsy; and promises to be an efficacious remedy in cases of apparent death from drowning, and other kinds of suffocation. *Dr. Odier*, of Geneva, recommends the use of water impregnated with oxygen gas, in atonic conditions of the primæ viæ, and in cases of hysteria, asthma, &c.

ELECTRISATIO. Electrization. Drawing electrical sparks from the joints when stiffened by chronic rheumatism, and from the limbs in cases of palsy, or communicating gentle shocks of electricity to the affected parts, have, in numerous instances produced a very beneficial effect. Also in gutta serena and cataract; and in deafness. Both these modes of using the electrical machine have moreover been resorted to with great success in cases of amenorrhœa. See EMMENAGOGUES. *Bianchini* sur la Medecine Electrique, 1750. *Linnæus* Consectaria Electrico-Medica, 1754. Reprinted in *Halleri* Disp. Med. Pract. Tom. i. and in *Amœn. Acad.* Vol. ix. *Gardane* sur l'Electricité Medicale, 1768. *Wilkinson* on Medical Electricity, 1799. *Kühn* über d. Med. Electrizität, 1797, in the 3d. Volume of *Duncan's* Annals of Medicine. Also *De Haen* Ratio Medendi, Tom. i. Cap. viii.

GALVANISATIO. Galvanization. Applicable to the same cases as electricity. *Wilkinson's* Elements

of Galvanism, 1804. *Carpue* Introduction to Electricity and Galvanism, with Cases showing their Effects in the Cure of Diseases, 1803. See also a paper on the Application of Galvanism to the Cure of Diseases in the Ed. Medical Journal, Vol. III.

TABULAR VIEW
OF
THE CONTENTS OF CLASS IX.

ANTISPASMODICS.

(1) *From the Animal Kingdom.*

AMMONIA, *ejusque præparata*. Volatile Alkali and its Preparations.

OLEUM *animale*. Animal Oil.

CASTOR *Fiber*. The Beaver.

MOSCHUS *moschiferus*. The Musk animal.

(2) *From the Vegetable Kingdom.*

ATROPA *Belladonna*. Deadly Nightshade.

BUBON *Galbanum*. Galbanum.

CALLICOCCA *Ipecacuanha*. Ipecacuanha.

CARDAMINE *pratensis*. Ladysmock.

CINCHONA *officinalis*. Peruvian bark.

¶ CITRUS *Anrantium*. The Orange.

CONIUM *maculatum*. Hemlock.

FERULA *Assafatida*. Assafætida.

HYOSCYAMUS *niger*. Henbane.

LAURUS *Camphora*. Camphor.

PAPAVER *somniferum*. White Poppy.

¶ RUTA *graveolens*. Rue.

VALERIANA *officinalis*. Valerian.

KALI *præparatum*, Ph. Lond. *Carbonas Potassæ*, Ph. Ed.
Alkali Vegetabile mite, Ph. Ebl. Prepared Kali. Carbonate
of Potass. Mild Vegetable Alkali.

(3) *From the Mineral Kingdom.*

SUCCINUM, *ejusque præparata*. Amber and its Preparations.

ANTISPASMODICS.

NATRON præparatum, Ph. Lond. *Carbonas Sodæ*, Ph. Ed.
Alkali Fossile mite, Ph. Eblan. Prepared Natron. Carbo-
nate of Soda. Mild Fossil Alkali.

ÆTHER vitriolicus, Ph. Lond. et Eblan. *Æther sulphuricus*,
Ph. Ed. Vitriolic Æther. Sulphuric Æther.

Spiritus Ætheris vitriolici compositus, Ph. Lond. *Liquor Æthereus*
Olcosus, Ph. Eblan. Compound Spirit of Vitriolic Æther.
Oily Æthereal Liquor.

BISMUTHI oxydum album. White Oxyd of Bismuth.

CUPRI quædam præparata. Some preparations of Copper.

HYDRARGYRI quædam præparata. Some preparations of
Quicksilver.

ZINCI præparata. Preparations of Zinc.

ELECTRISATIO. Electrization.

CLASS IX.

ANTISPASMODICS.

ALL those substances, which, whether introduced into the body or applied to its surface, have been found by experience to put a stop to convulsive movements or rigid contractions of the muscular fibres, are termed Antispasmodics. Of these substances there are many which differ from each other very widely both in respect of sensible qualities and chemical composition; which, indeed, is not surprising, when it is considered that spasmodic affections occur in various and even opposite states of the body; a circumstance which calls for nice discrimination on the part of the practitioner in the use of these remedies. Some of them being considerably stimulant in their operation, aggravate rather than alleviate spasm, when associated with plethora or obstruction. It is therefore of great importance to attend carefully to the state of the patient's body, previously to the exhibition of these medicines; to premise and accompany their use in epilepsy, chorea and hysteria, by proper evacuations; and to select from the great variety of articles which this class contains, such as are best adapted to the parti-

cular form of spasm which it is our business to cure.
Hoffmann de Antispasmodicis.

(1) *From the Animal Kingdom.*

AMMONIA, ejusque præparata. Ammonia or Volatile Alkali and its preparations. See p. 306—413.

OLEUM animale, Ph. Lond. *Animal Oil.* Dippel's Oil. Prepared by three times distilling oil of hartshorn. Has been given with advantage in some cases of hysteria and epilepsy. It has been recommended in hydrophobia. Given before the expected attack of an intermittent, it has, like opium, had the effect either of shortening and mitigating the paroxysm, or of wholly preventing it. Dose, from ten to twenty or thirty drops. *Dippel Vitæ animalis Morbus et Medicina*, 1711. *Vater de Virtutibus Olei Animalis*, 1725. *Haller de Præparatione Olei Animalis, ejusque Usu in Febribus Intermittentibus Medendis*, 1748.

CASTOR *Fiber.* Mammalia Glires. Linn. Mammalia Rodentia. Cuvier. Europe. North America. (Castoreum Russicum, materia, in folliculo prope anum sito, collecta.) The Beaver. Castor. The substance contained in the follicle situated near the anus. This odoriferous substance (says *Dr. Cullen*) is certainly on many occasions a powerful antispasmodic, and has been useful almost in every case requiring such remedies, especially when given in substance, and in large doses from ten to thirty grains. It has been supposed (he adds) by some to

have somewhat of a narcotic power; but he had never perceived this, excepting where such effects might be imputed to its removing the spasmodic affections which interrupted sleep. *Sydenham* used to prescribe it (but in doses too small) joined with sal succini, in hysteria; and *Whytt* and others in the same cases, combined with opium. *Morris* thought it serviceable, in some cases of hooping cough, when given in conjunction with the Peruvian bark. It has been recommended in epilepsy by some foreign practitioners; but there are few cases of the last mentioned disorder in which castor is likely to be of permanent utility. The *Tinctura Castorei*, Ph. Lond. is made by digesting for ten days, two ounces of Russian castor in two pints of proof spirit of wine. In the Dublin formula, 2 lbs. of proof spirit are directed to the same proportion of castor, and the digestion is continued for 7 days. The *Tinctura Castorei*, Ph. Ed. is made by digesting one ounce and a half of Russian castor in one pound of alcohol, for 7 days. Dose of these tinctures from 30 to 60 drops. The *Tinctura Castorei composita*, Ph. Ed. is made by digesting for seven days, Russian castor one ounce, and assafoetida half an ounce, in ammoniated alcohol one pound. This is a powerful antispasmodic. Dose, from twenty to thirty or forty drops. It is certain that in many of the disorders here mentioned, opium joined with camphor, ol. succini, ammonia, æther, and other antispasmodics, affords equal relief.

Moschus moschiferus. Mammalia Pecora. Thibet. (Moschus, materia, in folliculo prope umbilicum sito, collecta.) The Musk Animal. Musk is

the substance which is contained in the follicle situated near the navel. This odoriferous substance is a still more powerful antispasmodic than the preceding. It has been given with marked success in cases of hysteria, gouty spasms of the stomach, (*Pringle*) hooping-cough, (*Whytt* and *De Berger*) tetanus, (*Huck Saunders*) and hydrophobia, (*Johnstone*); also in hiccup, subsultus tendinum, and the delirium of typhoid fever, (*Wall.*) It has also been thought to be serviceable in epilepsy and mania; but in the last mentioned cases, the propriety of exhibiting it is very questionable. This drug is, as *Dr. Cullen* has remarked, more effectual when given in substance than under any preparation that has been attempted. He states that the dose to adults should be from ten to thirty grains; and that even when these large doses are found to be effectual, they must be repeated after no long intervals, till the disease is entirely overcome. It is joined with the volatile alkali, camphor, opium, æther, essential oils, &c. The most convenient form is that of a bolus. (*Thesaur. Med.* p. 248.) To children, and in cases of difficult deglutition, it has been administered clysterwise, with advantage. (*Thesaur. Med.*, p. 257.) The *Mistura Moschata*, Ph. Lond. (formerly *Julepum e Moscho*) is composed of musk two scruples, gum arabic and white sugar each one drachm, rose-water six ounces. Dose, from one to two ounces every second or third hour. *Reinik Momenta quædam de Moscho*, 1784, *Tralles de limitandis Laudibus Moschi*, 1783.

(2) *From the Vegetable Kingdom.*

ATROPA *Belladonna*. Deadly Nightshade. See NARCOTICS.

BUBON *Galbanum*. (See p. 272-428.) Galbanum. Used as an antispasmodic in the same cases, and in the same doses, as assafœtida, which see.

CALLICOCCA *Ipecacuanha*. Brotero. Cephaëlis *Ipecacuanha*. Willdenow. Pentandria Monogynia. Aggregatæ. South America. (*Ipecacuanha*. Radix.) *Ipecacuanha*. Given in minute doses, namely from half a grain to one or two grains, this root has been found to operate beneficially as an antispasmodic, in cases of asthma, whooping-cough, (in which last disorder it is combined with the mineral alkali) and uterine hæmorrhage. Respecting the other medical uses of *ipecacuanha*, as well as for an account of its various officinal preparations, the reader is referred to EMETICS and DIAPHORETICS.

CARDAMINE *pratensis*. Tetradynamia Siliquosa. Siliquosæ. Indigenous. (Cardamine. Flos.) Lady-smock. Recommended by Sir G. Baker in chorea and other convulsive affections. Dose of the dried flowers, from half a drachm to one drachm. It would appear that the cardamine has proved serviceable with some practitioners in epilepsy; but in a very bad case of that disorder (in which, indeed, various other antispasmodics had been in vain resorted to) the writer of this Synopsis did not find it

to be of any avail, although it was administered in very considerable doses.

CINCHONA officinalis. (See p. 370.) Peruvian bark. The use of this drug in hysteria, chorea, epilepsy, &c. has been already noticed under the class of TONICS. When administered in these cases, the cinchona is frequently joined with valerian, (*Thesaur. Med.* p. 251) castor, camphor, or ammonia.

¶ *CITRUS Aurantium.* (See p. 71-379.) The Orange tree. Several foreign writers have recommended the dried leaves of this tree in epilepsy and other convulsive disorders; but it would appear that they have greatly over-rated their antispasmodic powers. *Tissot* effected a cure in some instances of simple convulsion by this medicine, but he never experienced much benefit from it in epilepsies. *De Haen* (*Ratio Medendi*, Tom. II. p. 223) was disappointed in his attempts to cure epileptic patients with this remedy, although in some other convulsive affections it afforded considerable relief. *Dr. Cullen* states that the few trials he had made with these leaves, in such cases, were without success. Their sensible qualities (he observes) are bitter and aromatic; but in both these respects weaker than in the orange peel, and there is nothing in them that could lead him to expect any specific virtue. Dose of the dried leaves, from fifteen grains to two scruples. Given also in the form of a decoction, in the proportion of one ounce of the leaves to a pint of water. (*Thesaur. Med.* p. 255.)

CONIUM *maculatum*. (Cicuta.) Hemlock. See NARCOTICS.

FERULA *Assafoetida*. (See p. 152.) Assafoetida: This gum resin is a common and useful remedy in cases of hysteria, flatulent colic, and tympanitis. It has also been prescribed, and seemingly with advantage, in some cases of whooping-cough (where the disease has been of several weeks duration) and croup. In the true spasmodic asthma it is of little efficacy, but in what is termed the pituitous or humoral asthma, it affords considerable relief by promoting expectoration. Some writers have mentioned it as a remedy against epilepsy; but it is too stimulant in its operation to be recommended in that disorder. Dose, from ten to thirty grains. On many occasions, it is advantageously combined with opium, galbanum, castor, ammonia, and æther. *Dr. Cullen* has well remarked that where assafoetida is to be employed as an antispasmodic, the form of a tincture or volatile spirit is the most proper. In flatulent colic and some other cases, it is often administered clysterwise. (*Thesaur. Med.* p. 257.) It is also applied externally, in the form of a plaster, to the stomach or umbilical region in cases of gouty flatulency and hysteria. Of the various officinal preparations of this drug and their doses, mention has been made under the classes of EXPECTORANTS and EMMENAGOGUES.

HYOSCYAMUS *niger*. Black Henbane. See NARCOTICS.

LAURUS *Camphora*. (See p. 244.) Camphor.

Large doses of this drug have been prescribed by some practitioners (*Thesaur. Med.* p. 251) in maniacal affections, and as it seemed with some relief. The reports, however, respecting its favourable operation in such disorders, are not yet sufficiently numerous and varied to warrant a principal reliance upon it as an antimaniacal medicine. It is usefully joined, in cases of hysteria and gout, with other more powerful antispasmodic remedies.

PAPAYER *somniferum*. The White Poppy. See NARCOTICS.

¶ RUTA *graveolens*. (See p. 279.) Rue. This strong smelling herb and its preparations, were frequently prescribed by *Sydenham* in hysterical affections, but in modern practice little use is made of this herb, for the reason that there are so many other articles belonging to this class, which surpass it in efficacy. It is an ingredient in the *Pulvis Myrrhæ compositus*, Ph. Lond. (See EMMENAGOGUES.) The *Extractum Rutæ*, Ph. Lond. Ed. et Eblan. is given in the cases above mentioned, in doses of ten to twenty grains.

VALERIANA *officinalis*. Triandria Monogynia. Aggregatæ. Indigenous. (*Valeriana Sylvestris*. Radix.) Wild Valerian. The root of this plant is with good reason ranked among the most powerful of the vegetable antispasmodics. It has been found particularly efficacious in epilepsy; in which cases it should be prescribed in substance, and in large doses, i. e. about two drachms twice or thrice in twenty-four hours; or the powder may be given in

half this quantity, mixed with two ounces of its own infusion. On many occasions it is advantageously joined with the Peruvian bark (*Thesaur. Med.* p. 251.) The volatile alkali is an useful addition to it in cases of hysteria and hemicrania. The *Tinctura Valerianæ*, Ph. Lond. is made by digesting for eight days, in a gentle heat, four ounces of valerian root in two pints of proof spirit of wine. Dose, two drachms. The *Tinctura Valerianæ ammoniata*, Ph. Lond. et Eblan. (formerly *Tinct. Valer. Volatilis*) is made by digesting for the same space of time the same proportion of valerian root in two pints of the compound spirit of ammonia. In the Dublin pharmacopœia the proportions are the same, digested for seven days. Dose, from half a drachm to one drachm. *Marchant* Experiences sur les Vertus de la grande Valeriane sauvage, in the Histoire de l'Acad. Roy. des Sciences, année, 1706. *Tissot* in his Traité de l'Epilepsie, 1770. *Dresky* de Valeriana officinali, 1776, and reprinted in *Baldinger's Sylloge*, Vol. III. 1778.

KALI præparatum, Ph. Lond. *Carbonas Potassæ*, Ph. Ed. *Alkali Vegetabile mite*, Ph. Eblan. Prepared Kali. Carbonate of Potass. Mild Vegetable Alkali. Useful in convulsive affections connected with acidity of the primæ viæ, as noticed at p. 308, under ABSORBENTS.

(2) *From the Mineral Kingdom.*

SUCCINUM. Amber. Respecting this bituminous substance, *Dr. Cullen* has well observed, that in its crude state it is totally insoluble in the juices of

the stomach, and has always appeared to him to be absolutely inert when given in that way, as recommended by some old writers on the materia medica. And with regard to the tinctures prepared from it in the manner described in several foreign pharmacopœias, the quantity of amber with which they are impregnated, is so very inconsiderable, that whatever antispasmodic effects those tinctures may have produced, should be referred, -he thinks, rather to the different menstrua (alkohol and æthereal spirits) employed for the solution of the amber, than to the amber itself. The preparations from amber in our pharmacopœias, are *Sal Succini*, Ph. Lond. et Ebl. *Acidum Succini*, Ph. Ed. and *Oleum Succini*, Ph. Lond. et Ed. These products are obtained by distilling amber in a sand bath, with a fire gradually increased. The salt (acid) is afterwards purified (*Sal Succini purificatus*, Ph. Lond.) by solution in boiling water and crystallization. Of the salt or crystallized acid, the dose is from five to fifteen grains. It is seldom met with genuine, and whatever benefit in any cases of hysteria, or other nervous affections, may have followed its use, we are disposed to refer to the empyreumatic oil, which is never entirely separated from it in the ordinary mode of purification. On the whole we are disposed to consider the sal vel acidum succini as a preparation which may well be dispensed with. Of all the preparations of amber, the oil is doubtless the best; and when rectified by repeated distillations (*Oleum Succini rectificatum*, Ph. Lond. *Oleum Succini purissimum*, Ph. Ed.) Dr. Cullen relates that he had found it useful in many cases of epilepsy, hysteria, and other spasmodic affections. It may

be doubted, however, whether in such cases, it possesses any advantages over the rectified oil of hartshorn, termed animal oil. Dose of the oil of amber, from ten to thirty drops. The *Spiritus Ammoniae Succinatus*, Ph. Lond. (Eau de Luce) is composed of alkohol one ounce by weight, water of pure ammonia four ounces by measure, rectified oil of amber one scruple by weight, soap ten grains. The soap and oil of amber are digested with the alkohol until they are dissolved; after which the water of pure ammonia is added and mixed by shaking the whole together. This is used both internally and externally: internally in doses of ten or fifteen drops, in cases of hysteria, gouty affections of the stomach, tetanus, &c. and to persons bitten by venomous serpents; and externally in the accidents last mentioned, as well as in palsy. It is also used for smelling to, in cases of deliquium. *Hartmann de Succini in Medicina efficacia*, 1710. *Alberti de Succino*, 1750.

NATRON *præparatum*, Ph. Lond. *Carbonas Sodæ*, Ph. Ed. *Alkali Fossile mite*, Ph. Eblan. Prepared Natron. Carbonate of Soda. Mild Mineral Alkali. This alkaline salt, joined with small doses of opium and ipecacuanha, has lately been given with remarkable success in cases of whooping cough. The proportions for a child one year old are two grains of carbonate of soda and one drop of tincture of opium, with five drops of ipecacuanha wine, given every fourth hour. *Edinburgh Medical and Surgical Journal*, Vol. II. Of the other medicinal properties of this alkaline salt, mention has been made at p. 232 and 314.

Æther vitriolicus. Ph. Lond. et Eblan. *Æther sulphuricus*, Ph. Ed. Vitriolic *Æther*. Sulphuric *Æther*. This is advantageously joined in the usual doses (See STIMULANTS] with the tincture of assafoetida, or tincture of castor, in hysterical affections. It is, moreover, an useful addition to opium and musk in the subsultus tendinum, hiccup, and low delirium of typhus; also in the vomiting which occurs in the yellow fever; but it affords no relief against spasms which accompany attacks of the gout.

SPIRITUS Ætheris Vitriolici compositus, Ph. Lond. *Liquor Æthereus Oleosus*, Ph. Eblan. Obtained, according to the Lond. pharmacopœia, by mixing together two pounds of spirit of vitriolic æther and three drachms of oil of wine. According to the Dublin pharmacopœia, by taking what remains after the distillation of vitriolic ether, and distilling off one half with a gentle heat. It may be given in the same cases and in the same doses as the preceding.

BISMUTHI oxydum album. Magisterium Bismuthi. White Oxyd of Bismuth. Magistery of Bismuth. Of late years this metallic oxyd has been given with good effect, not only by *Dr. Odier* of Geneva, and other foreign practitioners, but also by some physicians of our own country, in cases of dyspepsia arising from increased irritability of the stomach, as well as in hysteria; but *Dr. Odier* never found it useful in epilepsy and other forms of convulsion; nor in dyspeptic affections of the stomach connected with diseases of the viscera. It is particularly efficacious in pyrosis and cardialgia. During its exhibition the belly is sometimes consti-

pated, sometimes relaxed. Dose, from four to twelve grains, three or four times a day. After all, is this metallic oxyd preferable to the oxyd of zinc in any of the disorders which are said to have been relieved by it? *Odier* Manuel de Medecine Pratique, 1805. *Carminati* Opuscula Therapeutica. *Marcet* in Mem. of the Lond. Med. Society; and *Bardsley's* Med. Reports, 1807.

¶ CUPRI *Ammoniaretum*, Ph. Ed. Cuprum Ammoniatum, Ph. Eblan. (formerly Cuprum Ammoniacum) Ammoniaret of Copper. Ammoniated Copper. Ammonical Copper. According to the formula of the Edinburgh College, this is made by taking purified sulphate of copper two parts, carbonate of ammonia three parts; these are rubbed well together in a glass mortar, [during which an effervescence takes place] until they unite into a violet-coloured mass, which after being wrapped up in blotting paper, is first dried on a chalk stone, and then by a gentle heat, after which it is put into a glass bottle closely stopped and kept for use. In the Dublin pharmacopœia the proportions are one part of vitriolated copper (sulphate of copper) to three parts of mild volatile alkali (carbonate of ammonia.) On the authority of the late *Dr. Cullen*, who first recommended this preparation to the notice of medical practitioners, it continues to be prescribed by some physicians in epileptic cases. Dose, from half a grain to four or five grains twice a day (*Thesaur. Med.* p. 186) We would remark, however, that in large doses it disturbs the stomach too much to admit of its continuance for a sufficient length of time, and that in small doses it affords

but a slight and temporary relief. As the preparations of zinc are more manageable, and at least equally efficacious, they may at all times supersede, for internal purposes, the *cupri ammoniaretum* and every other preparation of copper. The *Pilulæ Ammoniaretæ Cupri*, Ph. Ed. (formerly *Pilulæ Cupri*) consist of ammoniaret of copper sixteen grains, crumb of bread four scruples, water of carbonate of ammonia enough to form a mass to be divided into thirty-two pills. Supposing the ammoniaret of copper to be equally distributed throughout the mass, and that all the pills are of an equal bulk, each pill will contain half a grain of the cupreous salt. Dose, one pill twice a day at first, then two, then three, gradually increasing the number to as many as the epileptic patient's stomach will bear. The *Aqua Cupri Ammoniatæ*, Ph. Lond. (formerly *Aqua Saphirina*) has been already noticed under the class of ANTISEPTICS. It is only used as an outward application.

¶ *CUPRUM vitriolatum*, Ph. Lond. et Eblan. *Sulphas Cupri*, Ph. Ed. (*Vitriolum Cœruleum*) *Vitriolated Copper*. Sulphate of Copper. (Blue Vitriol.) Some practitioners have employed this preparation of copper for the cure of hysteria, flatulent colic, and epilepsy, in doses of a quarter or half a grain, repeated twice or thrice in the space of twenty-four hours. For these purposes, however, as well as for the cure of intermittents, (*Thesaur. Med.* p. 190,) it will always be safer and more advisable to employ the sulphate of zinc. Whenever an occasion presents itself we cannot refrain from cautioning against the use internally, of every preparation of copper.

HYDRARGYRUS, ejusque præparata. Quicksilver and its preparations. See p. 125, under SIALAGOGUES, where mention is made of the use of this metal, and its various preparations, in tetanus, hydrophobia, and other spasmodic disorders. Mercurial inunction has been resorted to with similar advantage in the same cases.

ZINCUM calcinatum, Ph. Lond. ~~Oxydum~~ Zinci, Ph. Ed. Calx Zinci, Ph. Eblan. (Flores Zinci) Calcinated Zinc. Oxyd of Zinc. (Flowers of Zinc.) Obtained by burning zinc in a crucible subjected to a red heat, having another crucible inverted over it, but so as to give free access to the air. During its combustion the zinc is oxydized and converted into exceedingly light, white flakes, commonly called flowers of zinc. They were administered with great success in epilepsy and other convulsive affections, upwards of forty years ago, by *Gaubius*, who derived his knowledge of their antispasmodic virtues from an empiric of Amsterdam. In consequence of his recommendation of this oxyd, many foreign practitioners were induced to make trial of it, and their report is, generally, in its favour. Among our own countrymen, who have employed this remedy with advantage in epileptic cases, may be mentioned *Drs. Percival and Haygarth*. Others have found the oxyd of zinc useful in cases of hysteria, chorea, asthma, hooping-cough, (*Duncan's Med. Comm.* Vol. v. Part II,) and tetanus. But if there are many who bear testimony to the remedial powers of the oxyd of zinc in the disorders abovementioned, there are, on the other hand, not a few who complain that they have derived only a very slight

and transitory relief from it; and some there are who state, that its exhibition was productive of no relief at all. This is the fate with most medicines; the successful administration of which depends upon a variety of circumstances; such as, whether the disorder be recent or inveterate; whether simple or complicated with much visceral affection; whether the administration of the remedy be premised and accompanied by the requisite evacuations; and lastly, whether it be prescribed in the proper doses, and continued for a sufficient length of time. Inattention to any of the circumstances here enumerated, would be followed by a partial or total failure of the medicine employed. For these reasons we should be cautious in condemning a remedy so long as the negative cases do not greatly outnumber the positive and undisputed instances produced in its favour. Dose, to children, from a quarter to half a grain, three or four times a day; to adults, from two to ten grains, three or four times a day. It may be given either in the form of powder or of pills (*Thesaur. Med.* p. 187.) *Hart de Zinco*, ejusque *Florum Usu Medico*, 1772. *Hartman super Florum Zinci Usu Interno*, 1778.

ZINCUM vitriolatum, Ph. Lond. *Sulphas Zinci*, Ph. Ed. *Vitriolum album*, Ph. Eblan. (See p. 323.) Vitriolated Zinc. Sulphate of Zinc. White Vitriol. This is prescribed in the same spasmodic affections, as the oxyd of zinc, and in many instances with the same good effect. Dose, from one to three or four grains. For other observations on the medical uses of the sulphate of zinc, see ASTRINGENTS and TONICS.

ELECTRISATIO. *Electrization.* According to the statements of some practitioners, electricity has been resorted to with advantage in epilepsy, catalepsy, and other spasmodic disorders. In the first mentioned disorder, however, it is a stimulus, which, we apprehend, will more frequently prove injurious than useful. For other observations on the medical powers of electricity, see STIMULANTS.

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OF
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CLASS X.

NARCOTICS.

THERE is no class of medicines in the administration of which more judgment and discrimination are requisite, than in the administration of those which are termed Narcotics. When given in full doses, much good or much mischief is sure to follow, according as they are properly or mistakingly prescribed. What a common practice it is to give them whenever a patient complains of pain, without duly investigating the cause of that pain? Whether it be the consequence of high inflammatory action, of a plethoric condition, or of a suppression of some periodical or habitual discharge? In these cases to prescribe any of the medicines belonging to this class, in a full or considerable dose, before the remedies suited to remove inflammation, plethora, and obstruction had been resorted to, would only serve to aggravate the disease. And even where there is no condition of the body which contra-indicates the use of Narcotics, it is of great importance to adapt the doses not only to the age and constitution of the patients, but likewise to the particular form of disease. For instance, in tetanus, hemicrania, and colica pictonum, opium and other narcotic medicines may be given in large doses with

excellent effect; but in phthisis pulmonalis, typhus-fever, and some other states of debility, small doses, repeated at proper intervals, are found to answer best.

In the administration of opium and other narcotics, it is moreover proper to consider whether, in the particular case in which they appear to be indicated, they should be prescribed alone, or in combination with other medicines: and if in the manner last mentioned, with what sort of adjuncts. Thus, in cases of synochus, acute rheumatism, and the early stage of dysentery, they should be given in combination with calomel and antimonials; in cases of asthma and phthisis pulmonalis, with ammoniacum, squill, and other expectorants; in cases of cholera, with diluents and demulcents; in cases of diarrhœa, with astringents and aromatics; in hæmorrhagic cases, with sulphate of zinc and other styptics; in hysteria, with the volatile alkali, æther, and fœtids; in convulsive affections, especially such as occur in children, with magnesia and other absorbents.

ACONITUM Napellus. *Aconitum Neomontanum.* *Aconitum Cammarum.* Polyandria Trigynia. Multisiliquæ. France. Switzerland. Germany. (Herba.) Aconite, Monkshood, or Wolfsbane. The dried leaves and extract of all these species of aconite have been used with advantage in chronic rheumatism, and arthritis. Also in scrophulous, cancerous, and venereal cases, particularly in venereal nodes. They abate pain and promote perspiration. Of the dried leaves, the dose is from 1 grain to 4 or

5, joined with antimony, or calomel, or guaiacum, according to circumstances. The *Succus Spissatus Aconiti Napelli*, Ph. Ed. is prepared by evaporating the expressed juice of the plant in a water-bath, saturated with sea-salt, to the consistence of honey. Dose, at first half a grain gradually increased to five or ten grains, or as much as the patient can bear, without producing any disagreeable effect. Previously to entering upon the use of the aconite, the primæ viæ should be duly cleansed. Some practitioners prescribe a tincture, made by digesting 1 part of the dried leaves in 6 parts spirit of wine. Dose, from 5 to 40 drops. *Stoerk* libellus quo demonstratur Stramonium, Hyoscyamum, Aconitum non solum tuto posse exhiberi hominibus, verùm et ea esse remedia in multis morbis maximè salutifera, 1762. *Reinhold* de Aconito Napello, 1769, and reprinted in the second volume of *Baldinger's Sylloge*. *Collin* Observationes circa morbos, 1772. *Ohdelius* in the Transactions of the Swedish Academy for 1776. *Razoux* de Cicuta, Stramonio, et Aconito, 1780.

ATROPA Belladonna. Pentandria Monogynia. Solanaceæ. Indigenous. (*Solanum lethale*. Radix. Folia.) Deadly Night-shade. All the parts of this plant, root, leaves, and berries, are narcotic. The root and leaves commonly produce a diaphoretic as well as an anodyne effect; but like the fox-glove, tobacco, and some other narcotics, the deadly night-shade not unfrequently operates as a diuretic. Sometimes it purges; and in a few instances (*Greding* apud *Ludwigii* Adversar. Medico-Pract. Vol. I. Part 4, and Vol. II. Part 2) it has

been known to produce a salivation. The root has been cried up as a specific against the hydrophobia, both as a preservative and curative remedy; but in this instance we fear its powers have been greatly over-rated. The leaves have been employed with good effect in epilepsy, chorea, and other convulsive disorders, (*Bergius* and *Greding*) as well as in palsy and mania. Also in cancerous affections, (*Lambergen* apud *Halleri* Disp. ad Hist. et Curationem Morb. Tom. II.) both internally and externally. In relating his experience of this remedy in the cases last mentioned, *Dr. Cullen* observes that he had a cancer of the lip entirely cured by it; a scirrhusity in a woman's breast, of such a kind as frequently proceeds to a cancer, he had found entirely discussed by the use of it; a sore a little below the eye, which had put on a cancerous appearance, was much mended by the internal use of the belladonna; but the patient having learned somewhat of the poisonous nature of this medicine, refused to continue the use of it, upon which the sore again spread and was painful; but upon a return to the use of the belladonna, was again mended to a considerable degree; when the same fears again returning, the use of it was again laid aside, and with the same consequence of the sores becoming worse. Of these alternate states of amendment and relapse, connected with the alternate use and abstinence from the belladonna, there were several repetitions which fell under his own observation; but the patient being removed to a great distance, he did not know how long those changes went on; but he was very well convinced of the power and virtues of this herb in certain cases. At

the same time he owned, that in several cases, both of scirrhusity and of open sores, it had not answered his expectations. *De Haen* relates that he gave this herb to four women affected with scirrhus and cancerous breasts. At first it seemed to afford some relief; but by continuation, the contrary effect was produced. One of the patients sunk under the profuse discharge, not of ichor but of pus; in the other three patients, the use of the belladonna was continued until the loss of appetite, diarrhœa, vertigo, and extreme languor, made it necessary to desist. *Dr. Cullen* mentions an instance of a person who, while using the infusion of the leaves, with the effect of nearly healing up a cancer of the lip, had a dryness and stricture of the pharynx and adjoining parts of the œsophagus come on to a great degree, and was suddenly killed by a very copious throwing up of blood, seemingly, as he was informed, proceeding from the fauces.

The beneficial effects of the belladonna in the convulsive affections before mentioned, as well as in paralysis and mania, may be referred partly to the power which, in common with other narcotics, it possesses of allaying irritation, and partly to its sudorific action. In such cases, with a view to promote its operation by the skin, it will generally be proper to direct the patients to be kept moderately warm, (but by no means in a high temperature) and to cause them to dilute sufficiently with aqueous liquors, taken in a tepid state.

A medicine capable of producing such powerful effects, demands the utmost caution on the part of

the prescriber. He should begin with the smallest doses, increasing them very gradually to a double, triple, or quadruple quantity, (in which cases the intervals between the repetitions of the doses should be proportionably lengthened) and desisting as soon as a dryness or stricture of the throat, or much diarrhœa, or great languor, with sickness and vomiting, or vertigo, and dimness of sight, come on.

Either the dried root or dried leaves may be used. The former is prescribed to children, according to their age, in doses of half a grain to three or four grains; to adults, from six to twelve grains. Of the dried leaves, (which are more commonly used than the root) the dose is from half a grain to ten grains. In some cases, rhubarb and other aperients are usefully joined with this medicine. *Lambergen* (see *Halleri Disputationes* above referred to) employed a watery infusion; but the proportion of water which he used is very vaguely expressed, when he says, that he steeped for the space of a night, one scruple of the dried leaves in ten tea-cups full of boiling water. Of this he gave the tenth part, i. e. one tea-cup full, for a dose. The *Succus Spissatus Atropæ Belladonnæ*, Ph. Ed. is made in the same manner as the inspissated juice of aconite. Dose, from one to five grains. *Timmerman* *Periculum Medicum Belladonnæ*, 1761. *Davies* de *Atropa Belladonna*, 1776, and reprinted in *Baldinger's Sylloge*. Four treatises by *Münch* the father and his two sons, published in 1781. 1783, and 1785, of which treatises two are in German and two in Latin.

CONIUM *maculatum*. Pentandria Digynia. Umbellatæ. Indigenous. (Cicuta. Herba. Flos. Semen.) Hemlock. Practitioners being more familiarized with the use of this plant than with that of the preceding and some other narcotic vegetables, it will not be necessary to enter so particularly into an account of its medical virtues.

It has been chiefly employed in scrophulous and cancerous disorders, both internally and externally, and in many of these cases with considerable benefit; in other instances, without any sensible relief, even after being continued for a great length of time. Like most proposers of new remedies, *Stoerck* has been too profuse in his encomiums of hemlock. It has been found useful in chronic rheumatism, and some cases of gout, where opium disagreed, and in that acutely painful complaint termed tic douloureux (*Fothergill*); also in caries of the bones (*Justamond*) and bad venereal ulcerations (*John Hunter*.) *Dr. Butter* prescribed it with marked success in the whooping-cough; and being less stimulant than opium, and less liable to check expectoration, it generally answers better than the inspissated juice of the poppy, in cases of phthisis pulmonalis: Or, in the last mentioned disorder it may sometimes be joined with a fourth or sixth of its weight of opium; for it is with narcotics as with medicines which belong to some of the other classes; namely, 2 or more joined together in different proportions often produce a better effect than any of them exhibited singly in an equal quantity. The *Succus Cicutæ spissatus*, Ph. Lond. et Eblan. and *Succus Conii maculati*, Ph. Ed. are prepared

in the same manner as the inspissated juice of the belladonna before mentioned. Dose of either, from one to ten grains. *Stoerck's* hemlock pills consist of the inspissated juice formed into a mass with a sufficient quantity of the dried leaves. This mass is divided into pills, each weighing two grains. (*Thesaur. Med.* p. 264.) The dried leaves may be given alone, in doses of five to fifteen grains. With the inspissated juice and powder are joined, according to the nature of the disorder in which they are given, calomel, guaiacum, ammoniacum, &c. In the administration of this, as of all other narcotic medicines, it is proper to begin with the smallest doses, afterwards gradually increasing them to as much as the patient can well bear. In this manner, many instances are recorded where astonishing quantities of hemlock extract have been taken, in cancerous and other painful disorders, without disturbing the constitution. It is a sign that the medicine has been pushed to its utmost length, when it disorders the head, stomach, or bowels. For external use, fomentations, cataplasms, and plasters, (*Thesaur. Med.* p. 272) are prepared from this vegetable. *Stoerck* Libellus de Cicuta, 1760. Ejusdem Libellus Secundus de Cicuta, 1761.

DATURA *Stramonium*. Pentandria Monogynia. Solanaceæ. Indigenous. (Herba.) Thornapple. This powerfully narcotic vegetable has been administered with good effect in epileptic and maniacal cases, according to the reports of *Stoerck*, *Odhelius*, *Bergius*, and others. The preparation usually given, is the inspissated juice. Dose, from one quarter to two or three grains. In the administra-

tion of this remedy, the same caution is requisite which we have pointed out in the instance of the belladonna. It is a sign that the dose has been carried to its height, whenever vertigo, dilatation of the pupils, head-ach, drowsiness, or difficulty of swallowing come on. Under such circumstances, its exhibition should be suspended for a time, and when again resorted to, the dose should be diminished. *Stoerck* Libellus de Stramonio, Hyoscyamo, et Aconito, 1762. *Wedenberg* de Stramonii Usu in Morbis Convulsivis, 1772, and reprinted in *Baldinger's Sylloge*, Vol. II.

DIGITALIS purpurea. (See p. 217.) Foxglove. It belongs to this place to take notice of the use of this remedy in cases accompanied with increased sensibility and increased frequency of the pulse, such as scrophula, phthisis, hæmoptoe, spasmodic asthma, palpitation of the heart, pneumonia, (after bleeding) &c. In these cases, it is prescribed either in the form of a powder or tincture, in the doses already mentioned at the page above referred to; and according to the particular kind of disorder in which it is prescribed, it is joined with opiates, expectorants, antispasmodics, &c. (*Thesaur. Med.* p. 271.) The *Tinctura Digitalis Purpureæ*, Ph. Ed. has been already noticed at p. 219. Dose, from ten to twenty drops. Respecting the use of this herb in hydropic affections, see *DIURETICS*. *Darwin's Zoonomia*, 2d Vol. 4to Edition. *Withering's* Account of the Foxglove, 1785. *Beddoes's* Treatises on Scrophula and Pulmonary Consumption. *Ferriar's* Essay on the *Digitalis purpurea*, 1797. *Hamilton* on the *Digitalis purpurea*, 1807.

HYOSCYAMUS niger. Pentandria Monogynia. Solanaceæ. Indigenous. (Herba. Semen.) Henbane. Wherever an anodyne is wanted, and opium disagrees, this herb and the preparations from it may be prescribed. It is especially suited to spasmodic and colicky affections, and to cases of chronic rheumatism and arthritis. Instances are also recorded of its beneficial effects in mania and melancholy; but in the last mentioned disorders, it has at least as often failed as it has succeeded, and is, on the whole, a doubtful remedy in diseases belonging to the order of Vesaniæ. It does not occasion costiveness, as opium does. The officinal preparations are the *Succus Spissatus Hyoscyami nigri*, Ph. Ed. made in the same manner as the inspissated juice of aconite, hemlock, &c. Dose, from one grain to fifteen or twenty grains. In the last mentioned doses, it frequently occasions head-ach, vertigo, vomiting, and diarrhœa. When any of these effects are produced, it should be immediately discontinued. The *Tinctura Hyoscyami nigri*, Ph. Ed. is made by digesting, for seven days, one ounce of the dried leaves of henbane in eight ounces of diluted alcohol. Dose, from ten to thirty or forty drops. The leaves are applied, in the form of a cataplasm, to scirrhus tumors and cancerous sores. We cannot refrain from repeating the remark thrown out in the *Thesaur. Med.* p. 264, that this plant possesses medicinal virtues which entitle it to a place in every modern pharmacopœia. *Stoerck* de Stramonio, Hyoscyamo, &c. 1762.

LAURUS Camphora. (See p. 244.) Camphor.

When given in large doses, this medicinal substance operates as a narcotic, and has been successfully prescribed by some practitioners in maniacal disorders, in which cases it may be combined with tartrised antimony, nitre, and other refrigerants. It is, however, less to be relied upon than many other articles belonging to this class. *Locher Observationes Practicæ circa Luem Venereum, Epilepsiam, et Maniam, 1762.*

NICOTIANA *Tabacum*. (See p. 120.) Tobacco. As an anodyne and antispasmodic, the infusion, wine or tincture of this herb is sometimes prescribed in cases of dysury. (*Fowler* as quoted at p. 221.) The *Vinum Nicotianæ Tabaci*, Ph. Ed. is made by macerating, for seven days, one ounce of tobacco in one pound of Spanish white wine. Dose, from fifteen to fifty or sixty drops. Respecting the uses of tobacco in asthmatic and hydropic affections, see EXPECTORANTS and DIURETICS.

PAPAVER *somniferum*. Polyandria Monogynia. Rhæades. Asia. Cultivated in Europe. (*Papaver album*. Capsula, ejusque succus spissatus *Opium dictus*.) White Poppy. The capsule, or head, and its inspissated juice called Opium.

Of all the articles belonging to the class of narcotics, Opium is that which is most extensively used. It would be contrary to the plan of this work, professedly practical, to enter into a rationale of its operation upon the human body. Waving, therefore, all inquiry of that kind, we shall proceed, 1^o to point out those diseases in which it is decidedly

beneficial, with the mode of exhibition best suited to each; 2° those diseases in which its utility is doubtful; 3° those in which it is manifestly hurtful; 4° the different preparations and doses.

1°. It is decidedly useful in the following cases: (a) *in various painful affections*, (b) *in many spasmodic disorders*, (c) *in profuse evacuations from the primæ viæ and other passages*, (d) *in some forms of pulmonary disease*, (e) *in the irritability and watchfulness which occur in some states of fever*, (f) *in some exanthematous diseases*, (g) *in the irritative and ulcerative action of the scrophulous, cancerous, and venereal virus*, (h) *in gangrene of the extremities*, owing to defective energy in the vascular system.

(a). Among the painful affections in which opium is prescribed with advantage, may be mentioned rheumatism and arthritis; cephalalgia; gastrodynia; flatulent colic, and head-ach; jaundice; stone and gravel; difficult parturition. In some of these cases, its exhibition should be premised or accompanied by evacuations suited to each form of disease; for example, by diaphoretics in rheumatic and arthritic cases, (see *Pulv. Ipecac. compos.*); by cathartics and deobstruents in colic and jaundice; and by alkaline diuretics in cases of stone and gravel. In some of these cases, opium is administered per anum as well as by the mouth.

(b). To the list of spasmodic affections in which opium is eminently serviceable, belong hysteria, chorea, tetanus, hydrophobia, hiccup, asthma, hooping-cough, and the convulsions of children.

In some of these cases, and especially in tetanus and hydrophobia, it is prescribed in very large doses.

(c). Opium is a very useful and efficacious remedy in profuse evacuations from the primæ viæ, and other passages; such as cholera, diarrhœa, and the advanced stage of dysentery; colliquative perspirations, and diabetes. In the first of these disorders it is joined with diluents, in diarrhœa with tonics and absorbents, in dysentery with laxatives and amylaceous substances, and in profuse perspirations and diabetes with extracts and decoctions of the astringent barks.

(d). The forms of pulmonary disease in which opium affords relief, are, besides convulsive asthma, and hooping-cough, mentioned above in section (b) catarrh, (but not in the very beginning of inflammatory catarrh) and phthisis pulmonalis. In the last mentioned cases it is given in moderate doses, (large doses being hurtful) and is joined with expectorants, demulcents, and refrigerants.

(e). The irritability and watchfulness which occur in some states of fever, are successfully counteracted by opium, given under proper regulations; namely, after due evacuations by the primæ viæ and pores of the skin, and where the watchfulness is not the consequence of an overloaded or inflammatory condition of the vessels of the brain. In these cases, it is usual to direct the opiate to be taken at night in a full dose, combined with diaphoretics, where the skin is hot and dry; or if there be great debility, without such a condition of the skin, with cordials

and aromatics. In intermittent fevers, the best effects have been produced by the exhibition of opiates in full doses, either just before the expected return of the paroxysm, or during the hot fit (*Lind, Duchanoy, Trotter, Clarke.*) When employed merely to counteract debility in typhus-fever, opiates should be administered in small doses, frequently repeated.

(f). In some exanthematous diseases, such as small pox (especially the confluent small pox) and measles. In the first of these diseases, *Sydenham* frequently prescribed it during the eruptive fever; but unless convulsions occur, it will generally be better to omit the use of this narcotic in that early stage of the disorder; afterwards it proves very serviceable in allaying restlessness, and in promoting the maturation of the pustules, when they do not rise well, especially when they are of the confluent sort. With regard to the employment of opiates in the measles, so long as pneumonic inflammation in any considerable degree accompanies this exanthema, their use is improper; but when no such condition of the respiratory organs is present, they may be prescribed with the best effect for the purpose of allaying the cough and counteracting restlessness. In the last mentioned disorder, (the measles) they are joined with demulcents and diaphoretics.

(g). Opium proves an useful remedy where the system is disordered by the irritative and ulcerative action of the scrophulous, cancerous, and venereal virus. In scrophula it is joined with deobstruents

and the bark, and with mercurial medicines, in venereal cases.

(h). In gangrene of the extremities, owing to defective energy of the vascular system, and frequently occurring in persons far advanced in years, opium has been found to have a most beneficial operation. In these cases it should be administered very freely; namely, 1 gr. every 4th hour with bark and wine.

2°. Among the diseases in which opium is a doubtful remedy, may be mentioned hæmorrhages, epilepsy, mania, and melancholia. In hæmorrhages, especially from the lungs, which are accompanied with much pyrexia, and increased action of the sanguiferous system, it is seldom that opiates are of real service; though many practitioners are in the habit of prescribing them, with little hesitation, in such cases. It is otherwise with hæmorrhages from the uterus, especially in cases of abortion and parturition, in which there is always more or less of pain, irritation, and spasm. By alleviating these symptoms, opium restrains the hæmorrhage. Opiates are very commonly given to epileptic patients, under the idea of allaying irritation, and because they are productive of the best effects in ordinary convulsions. But this mode of reasoning is extremely fallacious; and if opium has proved beneficial in some instances of epilepsy, it has most assuredly had no salutary effect, but a contrary one, in a greater number of instances. The same remark will apply to the employment of this remedy in maniacal affections, in which some modern practitioners have ventured to give it in very large

doses. We do not find that this practice has succeeded with many who have had the best opportunities of deciding upon it; and therefore, in cases of mania and melancholia, we consider opium as a remedy of doubtful operation.

3°. It remains to point out the morbid conditions in which opium is manifestly hurtful. Among these may be mentioned the early stage of inflammatory disorders; and plethora, general or partial. If, in such cases, opium be given before bleeding and other evacuating remedies have been resorted to, all the morbid symptoms are thereby aggravated.

4°. Having thus enumerated the various diseases in which opium is useful, as well as those in which it is of doubtful and hurtful operation, we now proceed to give an account of its different preparations. It will be proper, however, previously to mention that the medium dose of opium is one grain; and that when it is administered clysterwise, double the quantity given by the mouth may usually be given per anum. When employed in the manner last mentioned, mucilaginous and amylaceous substances are joined with it. (*Thesaur. Med.* p. 274.) During the use of opium, costiveness should be prevented by proper laxatives; and where its exhibition at night is followed by nausea and anorexia the next morning, it should be combined with aromatics, provided the use of these last be not contra-indicated.

OPIMUM purificatum, Ph. Lond. et Eblan. (formerly *Extractum Thebaïcum*) is prepared by dis-

solving, with a gentle heat, opium in proof spirit of wine, filtrating the solution through paper, and afterwards reducing the solution to a proper consistence, by distilling off the spirit. This purified opium is directed, by the London College, to be kept under two forms; namely, under the form of a soft extract (*opium purificatum molle*) proper for being made into pills; and of a hard extract (*opium purificatum durum*) proper for being rubbed into a powder. Dose to adults, about one grain, more or less according to the nature of the disorder. Concerning this mode of purifying opium, it has been remarked by some pharmaceutical writers, that it is robbed of some of its volatile parts by digestion and subsequent distillation with the vinous spirit; and that moreover the undissolved matter, which is left on the filtre, is not altogether an inert or refuse substance, but possesses some degree of narcotic virtue. Hence this purified opium is considered by some physicians as opium altered and impaired; and accordingly they prefer the crude or unpurified opium, which, in equal doses, they find to have a less heating and more steadily hypnotic effect. There is a watery extract, prepared from the white poppy-heads, in the Lond. and Ed. Pharmacopœias; viz. *Extractum Papaveris albi*, Ph. Lond. and *Extractum Papaveris somniferi*, Ph. Ed. Similar to this is the *Extractum Opii*, Ph. Eblan. which is made by first distilling 2 ounces of purified opium in 1 pound of boiling water, straining the solution while warm and afterwards adding 1 pound of cold distilled water. After exposure to the air for 2 days, the liquor is again strained, and lastly evaporated to the consistence of an extract. Dose of any of these

extracts, one or two grains. *Pilulæ Opii*, Ph. Lond. consist of purified opium two parts, extract of liquorice eight parts. Dose, five grains. *Pilulæ Opiatæ*, Ph. Ed. (formerly *Pilulæ Thebaïcæ*) consist of opium one part, extract of liquorice seven parts, pimento two parts. Dose, four or five grains.

The *Trochisci Glycyrrhizæ cum Opio*, Ph. Ed. and *Troch. Glycyrrh. comp.*, Ph. Eblan. have been already described under DEMULCENTS. *Confectio Opiata*, Ph. Lond. (formerly *Philonium Londinense*) consists of hard purified opium six drachms, long pepper, ginger, and carraway seeds, each two ounces, syrup of the white poppy, boiled down to the consistence of honey, three times the weight of all the other ingredients. The purified opium is first added to the syrup made hot, and then the aromatics previously rubbed into a powder. Dose, from fifteen grains to half a drachm. *Electuarium Opiatum*, Ph. Ed. (formerly *Electuarium Thebaïcum*) consists of aromatic powder six ounces, pulverized serpentaria-root three ounces, opium diffused in a sufficient quantity of Spanish white wine half an ounce, syrup of ginger, one pound. Dose, from one to two scruples. *Electuarium Mimosæ Catechu*, Ph. Ed. (formerly *Confectio Japonica*) See ASTRINGENTS. *Pulvis Opiatus*, Ph. Lond. consists of hard purified opium one part, burnt hartshorn nine parts. Dose, from five to fifteen grains. *Pulvis Opiatus*, Ph. Ed. consists of opium one part, prepared carbonate of lime (chalk) nine parts. Dose, the same as of the preceding. *Pulvis Cretæ compositus cum Opio*, Ph. Lond. See ABSOR-

BENTS. *Pulvis Ipecacuanhæ compositus*, Ph. Lond: et Eblan. *Pulv. Ipecac. et Opii*, Ph. Ed. see p. 172. *Syrupus Papaveris albi*, Ph. Lond. (formerly *Syrupus e Meconio*) is prepared in the following manner: Take dried white poppy heads three pounds and a half, purified sugar six pounds, distilled water eight gallons. The poppy-heads being cut into pieces and bruised, the water is added to them and boiled down to three gallons in a water bath, saturated with sea-salt. The decoction is then pressed out; and after being reduced by evaporation to about four pints, it is filtered boiling hot, first through a sieve, and afterwards through fine flannel. It is then put by to settle for twelve hours; after which the liquor is poured off from the sediment, and boiled down to three pints, when the sugar is dissolved in it, so as to form a syrup. The *Syrupus Papaveris somniferi*, Ph. Ed. is prepared from white poppy heads, dried and freed from the seeds, two pounds, boiling water thirty pounds, double-refined sugar four pounds. The sliced capsules, or heads, are first macerated in the water for twelve hours; after which the liquor is kept boiling until only a third part of it remains; the decoction is then strongly pressed out. It is then filtered and reduced by boiling to half the quantity; when it is again filtered. The sugar being then added, it is boiled a little while; so as to form a syrup. The *Syrupus Opii*, Ph. Eblan. is made simply by dissolving 48 grains of the extract of opium of the Dublin pharmacopœia, in 3lbs. of boiling water, and then adding double refined sugar enough to make a syrup. Dose of the two first-mentioned syrups, from half a drachm to two drachms to young persons, and from two drachms

to half an ounce to adults. Of the last from one scruple to three scruples to children, and from one drachm to three drachms to adults. It is very rarely, we fear, that the necessary pains are bestowed in preparing the two first-mentioned syrups, which are consequently of very uncertain strength, and, as opiates, little to be depended upon. By such long and repeated boiling, the virtues of the drug are altered and impaired. Moreover, if those syrups be ever so well prepared, they are extremely liable to ferment, especially in warm weather, by which means their narcotic power is considerably weakened. For these reasons it will generally answer better to prescribe in their stead a given quantity of tincture of opium, with a suitable proportion of simple syrup, or of syrup of marshmallows; and this even in the case of the *Syrupus Opii* of the Dublin pharmacopœia, though it is a much simpler preparation, and of a more determinate strength, than the *Syr. papav. alb.* Ph. Lond. and *Syr. papav. somnif.* Ph. Ed. *Tinctura Opii*, Ph. Lond. (in place of what was formerly termed *Tinctura Thebaica*) is made by digesting, for ten days, ten drachms of hard purified opium in one pint of proof spirit of wine. Medium dose, about twenty drops, equivalent to one grain of the solid opium. *Tinctura Opii* sive *Tinctura Thebaica*, Ph. Ed. et Eblan. (commonly called *Liquid Laudanum*) is made by digesting, for seven days, two ounces of opium in two pounds of diluted alcohol. Dose, fifteen or twenty drops. Although the proportions of opium, in these two tinctures, are different, yet as in the one, in which the proportion is less, the hard purified opium is used, and in the other, in which the proportion is greater,

crude opium; they are, upon the whole, nearly of an equal strength, a given measure of each yielding, on evaporation, nearly the same quantities of residuum. As these tinctures, when given in full doses the over night, occasion, in numerous instances, more or less of headach and nausea the next day; practitioners have endeavoured to prevent such disagreeable effects, by adding to these preparations various substances which they deemed to be correctives. Thus *Sydenham's* liquid laudanum was a solution of opium and saffron in Spanish white wine, aromatized with cinnamon and cloves: And the spices last mentioned were ingredients in the *tinctura thebaica* of the older editions of the London pharmacopœia. Although the simple solution of opium in proof spirit of wine (diluted alcohol) is certainly better adapted, by being less stimulant, to the majority of cases in which opiates are prescribed; yet, on the other hand, as by combining this narcotic with the spices before mentioned, headach, nausea, and languor are in a great measure prevented; we think it would be desirable that there should be two officinal tinctures of opium; namely, the simple tincture, as now prepared, still bearing the title of *tinctura opii*, and a compound tincture, impregnated with cinnamon and cloves, to be denominated *tinctura opii aromatica*. Some have been fond of preparing what they term concentrated tinctures of opium, one drop of which they represent to be equivalent to four or five drops of the officinal tinctures. But whatever may be the degree of saturation to which those tinctures may be brought at the time they are prepared, it is certain that, by keeping, they deposit a considerable quantity of the

opium which was diffused or suspended in them; so that, after a time, they come to be of a very indeterminate strength. And even if they always continued to be as concentrated as when first prepared, this very circumstance would be a strong objection against them; as it might too easily happen, that a drop or two more than was intended might escape from the phial in the compounder's hand, which might be productive of the most mischievous consequence, especially in the case of infants, or very young subjects. Again, for patients of the description last mentioned, a quantity of the saturated tincture less than that which is equivalent to four drops of the officinal tincture, that is less than a single drop (but how is the drop to be divided?) will often be as much as should be prescribed. We have seen the inconveniences of such concentrated preparations, by whatever name they may be called, and conceive it to be our duty, in the strongest manner possible, to discourage their use. *Tinctura Opii Camphorata*, Ph. Lond. et Ebl. (in place of what was formerly called Elixir Paregoricum) consists of hard purified opium, and flowers of benzoin, each one drachm, camphor two scruples, oil of aniseed one drachm, proof spirit of wine two pints, digested for ten days. In the Dublin pharmacopœia the same ingredients in the same proportions are digested for seven days. Dose, from half a drachm to two drachms. *Tinctura Opii Ammoniata*, Ph. Ed. (formerly Elixir Paregoricum) consists of benzoic acid and saffron, each three drachms, opium two drachms, oil of aniseed half a drachm, ammoniated alcohol sixteen ounces, digested in a close vessel for seven days, and strained through paper. This preparation differs

very widely from the preceding, the menstruum being ammoniated alkohol (spirit of ammonia) instead of the diluted vinous spirit, and the proportion of opium to the menstruum being four times greater, without any camphor. Dose, from thirty drops to one draehm. Both the one and the other are frequently prescribed in coughs, catarrhs and asthmatic affections. *Tinctura Saponis et Opii*, Ph. Ed. (formerly *Linimentum Anodynum*) is made by adding to two pounds of the *tinctura saponis* (formerly called *Linimentum Saponaceum*) one ounce of opium. Rubbed on the affected part in rheumatic pains of the joints, in sprains, &c. For formulæ of opiate plasters and opiate clysters, see *Thesaur. Med.* pp. 273—274. *Wedel Opiologia*, 1674. *Willis de Medicamentis Opiatis*, in his *Pharmaceutice Rationalis*. *Hoffman de Opii Correctione et Usu*, 1702. *Young's Treatise on Opium*, 1753. *Tralles Usus Opii Salubris et Noxius in Morborum Medela*, four Vols. 4to. 1774—1784. *Murray Apparatus Medicaminum*, second Vol. *Cullen's Mat. Med.* second Vol. *Woodville's Medical Botany*, third Vol.

TABULAR VIEW
OF
THE CONTENTS OF CLASS XI.

ANTHELMINTICS.

(1) *From the Vegetable Kingdom.*

ARTEMISIA *Santonica*. Wormseed.
 CONVULVULUS *Jalapa*. Jalap.
 CONVULVULUS *Scammonia*. Scammony.
 DOLICHOS *pruriens*. Cowhage.
 FERULA *Asafœtida*. Asafœtida.
 GEOFFRÆA *inermis*. Cabbage-tree.
 ¶ JUGLANS *regia*. Walnut-tree.
 LAURUS *Camphora*. Camphor.
 NICOTIANA *Tabacum*. Tobacco.
 OLEA *Europæa*. Olive-tree.
 POLYPODIUM *Filix mas*. Male Fern.
 ¶ SPIGELIA *Marilandica*. Carolina Pink.
 STALAGMITIS *Cambogioides*. Gamboge.
 TANACETUM *vulgare*. Tansy.

(2) *From the Mineral Kingdom.*

NATRON *muriatum*. *Sal Muriaticus*, Ph. Lond. *Murias Soda*, Ph. Ed. *Sal Communis*, Ph. Eblan. Muriated Natron.
 Sea Salt. Muriate of Soda. Common Salt.

CALOMEL, Ph. Lond. *Submurias Hydrargyri*, Ph. Ed. *Hydrargyrum muriatum mite sublimatum*, Ph. Eblan.
 CALOMEL. Submuriate of Quicksilver. Mild Sublimated Muriated Quicksilver.
 FERRUM *ejusque præparata*. Iron and its preparations.
 STANNUM. Tin.

CLASS XI.

ANTHELMINTICS.

OF the medicines which belong to this class, some destroy the different species of worms which breed in the alimentary canal, by their chemical, others by their mechanical action upon those animals; but by far the greater number of anthelmintic or vermifuge medicines operate in no other manner than as drastic purges, bringing away the morbid accumulation of slime from the intestines, and, with the slime, the worms which were lodged in it. After the worms have been brought away by these remedies, the bowels should be strengthened by bitters and other tonic medicines; and the use of green vegetables, or much garden stuff of any kind, and of malt liquor, should be forbidden.

(1) *From the Vegetable Kingdom.*

ARTEMISIA *Santonica*. Syngenesia Polygamia superflua. Compositæ discoideæ. Asia. Africa. (Santonicum. Cina. Semen.) Wormseed. Ten or twenty grains, or more of the seeds of this plant are given in syrup or treacle to children troubled with worms,

interposing a cathartic. *Cartheuser de Semine Santonico*, 1749.

CONVOLVULUS Jalapa. (See p. 188.) Jalap. When employed as a vermifuge, it should be given in full doses, or if in medium doses joined with calomel, assisting its operation by solutions of vitriolated natron, or vitriolated magnesia. It may be given in the form of a powder, or of pills at bed time, and worked off the next morning with the saline cathartics just mentioned. Jalap exhibited in this manner in sufficient doses, and in combination with calomel, will commonly render it unnecessary to have recourse to any other vermifuge medicine.

CONVOLVULUS Scammonia. (See p. 189.) Scammony. Its use in worm cases has been already noticed under CATHARTICS.

DOLICHOS pruriens. *Diadelphia Decandria*. *Papilionaceæ*. West Indies. (*Stizolobium*. *Leguminis pubes rigida*.) Cowhage, or Cowitch. The stiff hairs on the pod. These hairs are mixed up with syrup or treacle, of which one, two, or three teaspoonfuls, according to the age of the patient, are given for a dose in the morning, upon an empty stomach, or night and morning. (*Thesaur. Med.* 284.) This remedy acts mechanically, and has been found to be very efficacious in most worm cases, but particularly in cases of the lumbricus or round worm. For children from infancy to the age of six or eight, *Mr. Chamberlaine* says he has generally found a teaspoonful of the cowhage electuary

to be a sufficient dose ; from thence to fourteen, a dessert spoonful is found to answer well, and, for all above that age, a tablespoonful. Formerly he thought it might be sufficient if taken once a day ; but experience had shewn him, that it answers better when taken twice ; viz. at night going to bed, and in the morning at an hour before breakfast ; and though little or no previous medicine is necessary, yet (he remarks) it is generally found to operate more effectually where a gentle emetic (provided nothing forbids it) has been premised. He further observes that the cowhage after being begun upon, is to be continued for three or four days ; after which some brisk purgative, such as jalap or infusion of senna, is to be taken ; which will in general bring away the worms, if there be any. The cowhage is to be continued as long as there may seem occasion ; repeating the purgative at intervals of three or four days. *Bancroft's Natural History of Guiana.* *Cochrane*, in the second Vol. of the Medical Commentaries. *Chamberlaine's Treatise on the Stizolobium or Cowhage*,

FERULA *Asafætida*. See p. 152—273.) *Asafætida*. Given both by the mouth and per anum. in worm cases, and particularly in cases of tapeworm. *Thesaur. Med.* p. 287.

GEOFFRÆA *inermis*. *Diadelphia Decandria*. *Papilionacæ*. Jamaica (Cortex.) Cabbage-tree. Decoctions of the bark of this tree have been given by the West India practitioners with great success, in worm cases. It operates as a cathartic. The decoction is made by boiling an ounce of the

bark in a quart of water until it is reduced to half a pint, and becomes of the colour of amber or Madeira wine. (*Thesaur. Med.* p. 206.) Of this strong decoction the dose to children is one table spoonful; to adults four times that quantity. This bark may also be given in the form of a powder, in doses from five grains to a scruple, alone or joined with calomel or jalap; but the decoction commonly answers best. The extract is the least eligible of all the preparations of this vegetable. *Wright*, in the *Phil. Trans.* Vol. 67, *Bondt de Cortice Geoffrææ*, 1788.

¶ *JUGLANS regia*. Monœcia Polyandria. Amnataceæ. Cultivated in England. (Fructus immaturus. Putamen Nucum Juglandum.) The Walnut tree. An extract prepared from the green rind of the unripe fruit is given in worm-cases, in doses from ten to thirty grains. During the use of this medicine, a mercurial purge should be occasionally interposed. The powers of this extract, as an anthelmintic, are so greatly surpassed by most of the other articles belonging to this class, that it may well be dispensed with.

LAURUS Camphora. (See p. 244.) Camphor. Dissolved in oil, and administered glysterwise, camphor has been found useful in cases of ascarides. *Thesaur. Med.* p. 287.

NICOTIANA Tabacum. (See p. 120—221.) Tobacco. The anthelmintic powers of the infusion of

this herb, administered clysterwise, have been already noticed under CATHARTICS.

OLEA Europæa. Diandria Monogynia. Sepiariæ. Southern parts of Europe. (*Oliva. Fructus Oleum expressum.*) The Olive-tree. Olive-oil given in doses, from a tea-spoonful to a table-spoonful, to children and young persons twice a day, with the occasional interposition of a purge, has brought away worms in several instances. The late *Dr. Wall*, of Worcester, thought that spirit of ammonia added to the oil rendered it more efficacious. (*Medical Tracts*, p. 90.)

POLYPODIUM Filix mas. Cryptogamia Filices. Indigenous. (*Filix. Radix.*) Male Fern. The manner of giving this remedy, in cases of tapeworm, is particularly described in the *Thesaur. Med.* p. 277; to which, in order to avoid repetition, the reader is referred.

¶ *SPIGELIA Marilandica.* Pentandria Monogynia. Stellatæ. Carolina. (*Radix.*) Carolina pink. From ten to twenty grains of the root of this plant have been given twice a day to children between two and twelve years of age, when troubled with worms. It generally operates as a purgative; but when it does not produce this effect in a sufficient degree, proper doses of rhubarb, jalap, or calomel, should be given with it. As the spigelia may be easily overdosed, and in that case produces alarming symptoms, it should perhaps be erased from the catalogue of vermifuge-medicines, of which there is a sufficient number without it, that are at least

equally efficacious, and much safer in their operation.

STALAGMITIS Cambogioides. Polygamia Monœcia. Tricoccæ. Arbor. East Indies. (Gambogia. Gummi-Gutta. Gummi-resina.) Gamboge. The anthelmintic powers of this gum-resin have been already noticed at page 201 under CATHARTICS. Joined with calomel, it is remarkably efficacious against the tapeworm; and to these two remedies, and not to the root of the polypodium, is to be referred the success of *Nouffer's* method of cure in that species of worms.

TANACETUM vulgare. (See p. 393.) Tansy. The dried and pulverised flowering tops of this plant are given either alone or joined with the seeds of the *artemisia santonica*, in doses of fifteen to thirty grains.

(2) *From the Mineral Kingdom.*

NATRON muriatum. *Sal Muriaticus*, Ph. Lond. *Murias Sodæ*, Ph. Ed. *Sal communis*, Ph. Eblan. Muriated Natron. Sea Salt. Muriate of Soda. Common salt. Half a drachm or two scruples of this salt dissolved in water, and taken early in a morning for some length of time, have caused worms to be voided in considerable quantities, in many instances.

CALOMEL, Ph. Lond. *Submurias Hydrargyri*, Ph. Ed. *Hydrargyrum muriatum mite sublimatum*,

Ph. Eblan. (See p. 137.) Calomel. Submuriate of Quicksilver. Mild sublimated muriated Quicksilver. Notice has been already taken of the vermifuge powers of this preparation of quicksilver, under CATHARTICS. When used with the intention of bringing away worms, it is often joined with jalap, gamboge, and other purgatives. As a vermifuge, it is prescribed too indiscriminately and too freely by some practitioners; and it is certain that in many delicate and irritable children, and especially in such as are predisposed to pulmonary and scrophulous affections, the repeated use of this and other mercurials has an injurious effect. In such cases, anthelmintics derived from the vegetable kingdom are to be preferred.

FERRUM. Iron. Various preparations of this metal, such as the rubigo ferri, (carbonas ferri, Ph. Ed.) the ferrum vitriolatum, (sulphas ferri, Ph. Ed.) the ferrum tartarisatum, &c. have been given in worm-cases by different practitioners, and with considerable advantage. Alone, however, they seldom prove adequate vermifuge remedies, since there are few constitutions which can bear them in quantities sufficient for the destruction and expulsion of worms. On the whole, the preparations of iron succeed best as anthelmintics, when exhibited in combination with bitters and other tonics, after the previous use of the geoffræa, jalap, scammony, gamboge, and other purgative worm medicines.

STANNUM. Tin. On the recommendation of the late *Dr. Alston*, of Edinburgh, the stannum pulveratum and tin filings have been frequently

prescribed in cases of tænia and gourd-worm, mixed up with honey or treacle, and given in doses of two or three drachms in a morning, fasting. (*Thesaur. Med.* p. 281.) This remedy acts mechanically, and requires the assistance of cathartic medicines.

THE END.

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